

ESTABLISHED 1848

RURAL  
WORLD

COLMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE, HORTICULTURE, HORSES, CATTLE, SHEEP, SWINE, ETC.

ST. LOUIS, MO., WEDNESDAY, MAY 16, 1900.

Volume LIII, No. 19.

### COLMAN'S RURAL WORLD

NORMAN J. COLMAN, Editor.  
LEVI CHURCH, Editor.

Published weekly at 721 Olive St., Rooms 1214, 1215 and 1216 Chemical Building, corner Olive and Eighth Sts., St. Louis, Mo., at one dollar a year. Eastern Office, Chalmers D. Colman, 520 Temple Court, New York City.

Letters should be addressed to COLMAN'S RURAL WORLD, 721 Olive St., St. Louis, Mo. Advertising rates furnished on application. Advertisers will find the RURAL WORLD one of the best advertising mediums of its class in the United States.

WRITE A LETTER AT ONCE.

We trust RURAL WORLD readers will not become unkind of the importance to them of the passage of the Grouse bill by Congress. Under the management of the National Dairy Union an excellent campaign, directed personally by Secretary Chas. V. Knight, has been carried on to secure the passage of this bill, and as will be seen by reference to page two of this issue, the prospect is good for its passage. Missourians who are interested in the welfare of the state, and who realize that this will be greatly enhanced by the development of the dairy industry, should communicate with the Honorable James County, member of Congress from the Seventh Missouri Congressional District, who is the Missouri member of the Agricultural Committee which has charge of the Grouse bill. Mr. County is for the bill, but there is strong opposition to it from the oleomargarine people, and he needs to know that the people of Missouri approve of his support to the measure. So write to your own representative, asking him to vote for the bill, and also to Mr. County, and commend him for his support of the measure. Do this at once.

WHAT BEAT HANEY?

The politicians of Illinois have been busy since the Republican state convention at Peoria last week in figuring out the whys and wherefores of Judge Hanev's defeat for the gubernatorial nomination, which he was expected to secure by an overwhelming vote. There was a fact in the contest which seems to be overlooked by the practical politicians, but which we would suggest it would be well for aspirants for office in Illinois as well as in other states to give heed to. By a decision in some oleomargarine cases in Chicago courts and in a statement accompanying the decision, Judge Hanev took a position which showed him to be a friend of the oleomargarine interest. This drew the attention of Illinois dairymen and farmers to him and put them against him as a candidate for the gubernatorial nomination. Hanev's friendliness to the oleomargarine interest was further shown by the fact that Congressman Lorimer of Chicago, who is one of the strongest fighters in Congress for oleomargarine, and W. J. Moely, one of the leading oleomargarine makers, were the chief supporters of Hanev during the campaign. And while it was confidently asserted up to the opening of the convention that Hanev would win the prize on first ballot, it seems that he didn't. The influence of dairymen may not have caused Hanev's defeat, but it will be good politics for candidates not to have this to contend against.

THE FARM WATER SUPPLY.

No problem of farm economics needs more careful consideration, both in its relations to the direct business management and to the household needs of the farm home, than does the water supply. Abundant, pure and easy access for stock and house use are the important factors to be aimed at when planning for water supply. On farms that are watered by springs or running water, wells and cisterns are the only recourse, and the water supply under such conditions means expenditure of money and many times a liberal expenditure; but while this is true, it is equally true that a scant supply of water means loss, and loss irretrievable. Stock not having sufficient water, and not being watered regularly, which is usually the case when not plentiful and easily obtained, will not thrive well.

Wells and cisterns should never be placed in such proximity to barns and privy vaults that they are contaminated by wastes from such sources. Much of the disease of stock is traceable to water thus polluted. The farmer's family too often falls a prey to diseases which are bred by fifth finds lodgement in a seemingly pure glass of water. Careful analysis of a city's water supply during an epidemic of typhoid fever often discloses the fact that the death-trap was in the drinking water; and skilled chemists and bacteriologists are employed to show the importance of pure water and large sums of money are expended in securing this safeguard of health to the citizens.

The farmer must use intelligence and exercise judicious care when digging wells and cisterns; for if located in such places where manure of various kinds leaches into the earth from stables, privy vaults, etc., these wells from which the family drink will soon be death traps. These are facts which are frequently ignored, but the intelligent physicians of your community could reveal some truths

### SPECIAL OFFER.

While the regular subscription price for the RURAL WORLD will remain at one dollar per year, yet, in order to more than double our present circulation for a brief period we have determined for a brief period to allow all of our present subscribers to renew their subscriptions by sending the name of a NEW subscriber with their own for one dollar—thus getting two papers for one year for only one dollar. In all cases, however, the additional name or names must be new subscribers. Renewals will not be received at fifty cents, except when accompanied by a new subscriber. Two NEW subscribers at the same time, however, will be received for one year for one dollar. New subscribers can also send additional new subscribers on the same terms. This is below the actual cost of the paper. But so anxious are we to have the RURAL WORLD enter tens of thousands of new homes that we are willing to make this low offer. We know the RURAL WORLD is doing a grand work in uplifting the farmer, and we are more than anxious that its benefits shall be extended to the widest limits, hence this special offer. We hope to have 100,000 subscribers on our list for 1900.

regarding the water being drunk which would make you shudder. If you are suspicious that your wells are polluted ask with the wisdom and decision such conditions require.

Having secured pure water in abundance then arrange to have it so it can be freely used at both barn and house. The good wife would say at the "house and barn." There is nothing the farmer's wife so envies her sister living in the city as the water which she gets all the water she needs. The water in the kitchen, in the bath-room, in the laundry is the boon of the wife of the commonest toiler; and in the homes of the more pretentious many other rooms are supplied with water. This abundance of water is obtained merely by turning a bright shining brass or nickel-plated faucet. If possible give the woman on the farm a water supply as nearly similar as conditions will admit. The pump can be placed in the kitchen, many times with but a trifle more cost than outside, and muscle and nerve force thus saved will be money well invested. If the house is properly supplied with an abundance of good, wholesome water, the wife will be content, and be sure that similar conditions will exist at the barn.

Many a crop of berries, patch of cucumbers or melons is lost because of lack of water, which if watered for a few days would have yielded profitable crops. In seasons of drought many such a crop, if saved when prices run high, would pay for the cost of the water.

RURAL MAIL FACILITIES.

The following from a regular Washington correspondent to a city daily shows that the American farmer will be heard when he speaks:

"The statesman who antagonizes rural free delivery is kicking against the pricks. This was made apparent in the recent debate by the House on the post office appropriation bill. Several city Representatives undertook to point out the cost and its prospective increase of this kind of service. They were engulfed in a popular tide which knew no party boundaries. No postal experiment has brought out such emphatic commendation. It was made apparent that no backward step can be taken. Reports showed that where the routes are selected with due care as to the character of the roads and the number of farmers to be served the amount saved from the abolition of fourth-class offices with the growth of revenue balanced the extra expense. Perhaps the most significant fact about the experiments is the rapid increase in use of the mails by farmers when they find themselves served at their doors from day to day. On some rural routes the postal receipts have increased from \$50 to 75 per cent. Some routes already attract pay for the additional cost of free delivery by this increase of patronage. The debate indicated that it will be a very short time until Congress will attempt to make a more general application of the principle of rural free delivery. In the recent debate it was proposed that hereafter when contracts are let for the carrying of the daily mail from post office to post office in the country the free delivery and collection from farm houses on and adjacent to the route shall be included. This is a rather startling proposition, but it was advocated with considerable zeal."

Missouri apples are shipped to England, Kansas flour to Scotland and Texas hogs to South Africa. Verily, the rest of the world could not keep house without the help of the United States.

A recent shipment of \$2,000 bushels of wheat from Portland, Oregon, to Yokohama was the first cargo made up exclusively of this cereal that ever crossed the Pacific to Japan.

### SOME INSTRUCTIVE FERTILIZER EXPERIMENTS.

Editor RURAL WORLD: Very recently I visited one of the best equipped and best managed Agricultural Experiment Stations in America. I there saw in one of the greenhouses several series of most elaborated experiments with fertilizers. Each test was made in a box just so large and every atom of soil or manure of any kind was most accurately weighed or measured and records kept of everything which was done. Different crops were grown with the same treatment in every way to determine if possible, what differences would appear. Different soils were used to see what various effect the same kinds and amounts of manures would have upon each as shown by the resulting crop. In some cases a single fertilizer ingredient was used, in quantities varying from very little to more than the plants could possibly utilize. In others various combinations of fertilizers were used, and in varying quantities. In each series there were check plots to test the effects of the manures as contrasted without any.

In one series there were two kinds of soil used, one being a good clay loam and the other a thin sandy loam. Good stable manure was applied to each in quantities varying from 5 to 50 per cent, and one plot was all manure. Lettuce was planted in each plot. The contrast was wonderful. Where no manure was used the plants were exceedingly small, and scarcely worth anything in the sandy loam. In the whole manure almost the same was true; 50 per cent plots showed great advantages and so did those having smaller amounts. The 5 and 10 per cent plots were the best in appearance, and seemed equally good. The smaller proportions would cover the ground about two inches deep, but it was mixed to the full depth of the soil under test, which was exactly one inch. There was little apparent difference in the plants on the two kinds of soil where the manure was applied. We would learn from this that manure is not so much a matter of quantity as of quality, and that a moderate amount, if well rotted, as this was, will at once bring poor land into a high state of fertility.

Another series of experiments was made in glass sand, which is crystal, flintrock ground fine and almost as white as snow and devoid of any fertility whatever. There was used, as manure, various quantities of phosphate rock. In one plot was acid phosphate, which is finely ground phosphate rock treated with sulphuric acid to still further reduce it and make it more available. In another there was the same sort of rock of varying degrees of fineness, which were graded by passing the material through sieves of known degrees, but none of these had been treated by acid. Two crops were used, cabbage and oats, each being treated with the same quantity of manure. The contrast between the two plants in their behavior was remarkable. The cabbage in all of the plots to which the phosphate was applied did equally well, neither acid diluted rock nor the finer ground samples were in any way more available to the plants than the coarser grades. The cabbage seemed to be able to lay hold of one's acid as easily as of the other. Judging by the size and color of the plants. Those in the check or unmanured plot had scarcely grown at all, merely living on the little nourishment within the seeds. The oats gave a very different result. The plants in the plot with acidulated phosphate rock were tall and strong looking much like oats at full growth. The plants in the other plots showed that the ground phosphate rock had been of almost no benefit. These plants were but little larger than those in the unmanured plot.

We learn from this that there is a vast difference in the ability of different kinds of crops to appropriate the fertility that may be in the soil naturally or that we may put in our effort to feed them. The director of the station told me that they had tested cauliflower, radishes and other crops of the cruciferous family and found them also able to feed upon crude or acidulated phosphate rock. We have in this a key to some of the problems of farm economy. That we may, as has been stated already, in some of the rural papers and bulletins, use certain crops to break open the sealed doors, by changing crude and cheap materials into organized and easily available forms within their own structures and thus preparing them for the higher and more valuable types of plants. We may be assured that the whole cabbage, turnip and radish family is of this character. Let us act upon the suggestion.

There were other experiments being conducted in which potash and nitrogen in various forms were being used, some alone and others in combination, thus showing the effect of incomplete and complete fertilizers. Wherever the potash and nitrogen were added to the phosphoric acid there was a remarkable increase in vigor of the growing plants. Murate and sulphate of potash seemed to be the very best forms in which to apply potash and nitrate of soda for nitrogen. Field tests have also shown the same to be true in many cases that have come under my notice. If farmers would purchase materials and apply them in an intelligent manner, giving heed to the advice of those who are conducting such thorough and conscientious experiments, as have

just been described, instead of going ahead blindly as the generally do in buying and applying mixed fertilizers, they would find it greatly to their profit.

H. IVAN DEMAN.

PETTIS CO., MISSOURI.

Editor RURAL WORLD: During the past week the writer has driven twice across this (Pettis) county, and I want to say that I saw as fine an agricultural and stock country as I could wish to see. If some of the people of the more eastern mountains and less fertile states were to wait up some bright May morning in Pettis county, Mo., they would surely think they had reached the promised land. There may be some garden spot in some riverbottom county in the state equal to old Pettis with her beautiful landscape, her rolling prairies, rippling brooks; but by perpetual springs of sparkling water, but I have yet to see a more delightful place in which to cast one's lot and establish a home than right here in the central part of one of the greatest counties in one of the grandest states of the Union.

No one can traverse this county in any direction from border to border, and not be struck with amazement at the evidences, on all sides of the intelligence and thrift of her citizens of the well kept and painted farm houses, with large, and well arranged stock sheds, grain barns, and generally well cared for, and churches and school houses at convenient distances all over the county. All these things inspire one to make yet greater effort to encourage and uplift the cause of agriculture and stock raising.

Washington well said, "Agriculture is the most healthful, most useful and most noble employment of man." Pettis County can show as fine horses, cattle, sheep, hogs, pigs and mules as any state of the Union and, men come from the uttermost parts of the earth to woo and win her fair women. The man who is so constituted as to enjoy country life and who is not content with a small farm, but who desires to make a home, will never be pleased or contented this side the grave; and it's doubtful if such a one will be entirely satisfied with the environment thereafter.

There is no place on this green earth for the cynic and pessimist. They will not thrive where men are busy and making an effort to keep pace with the times and progress of these, the most active and progressive days this country has ever seen. Truly, in all avenues there are unfavorable and discouraging conditions, and farming comes in for its full share, but if we keep an eye on the fellow who keeps bucking at his business, we shall see that nine times out of ten he "gets there, just the same," while the other "fellow," who is disposed to see no good in anything and sits down to figure out how much an honest effort to do something will cost him, will nine times out of ten be found floundering on the wrong side of the ledger. When Mr. Optimist is footing up the profits on his season's business. During the past few years there have come under my observation some experiences which are highly and forcibly illustrative proof of this.

W. D. WADE.

NOTES FROM OHIO.

Editor RURAL WORLD: We are a little short on teams this year, as we only have two good horses, a two-year-old colt and a driving horse. This fact induced us to plant two acres of corn without plowing the land. The two acres is a steep, limestone, clay loam lying to the south, and is of a very loose nature in spring, as snow seldom lies on it many days and the frost mellow it nicely. It was in tobacco last year. On April 21, we harrowed it well, marked between the tobacco rows with shovel plow, dropped the corn and covered it with hoes. The work was all done by 3 o'clock. Although it seems a primitive way of corn growing, we expect not less than 60 bushels per acre.

There has been no rain since about April 13, and pastures, meadows and wheat are suffering. I am also a little uneasy about the outcome of potatoes and oats, as drought in April and May is apt to result in a short crop of both. Farmers everywhere are complaining about trouble in getting late plowed ground in order; they made a mistake in not harrowing each half-day's plowing as soon as done. This is not necessary early in the season, but as soon as April 20 is passed it should always be done.

I liked Leroy Cardner's letter in RURAL WORLD of April 21. Farmers' boys often become enamored with the outside glitter of some so-called genteel profession, when they do not know of the hardships and privations that are attendant upon it. One night the past week my boys went to a school commencement in a town three miles from us. The main attraction of the evening was a band of five singers, and these five received \$75 for their services. The boys thought that this was better than farming, but I analyzed the case for them. The singers paid their own expenses. They came 16 miles and owing to poor railroad connections were two nights from home, even if they got "rates" on the railroad. Their fare was \$5.00 each, their hotel bill could not have been less than \$1 each, so the net profit to each person was but little

over \$5, for two days, and they don't get a job every day.

Stick to the farm, boys, even if your work seems hard and the pay small. Sixteen dollars a month, board included, on a farm, is more real cash at the end of the year than \$60 a month and board yourself in any city. Any board and room in a city, that will compare at all favorably with the board and room furnished by even the average tenant farmer, will cost from \$1 to \$1.50 per week, and your wash bill will be extra. Then there are so many chances to spend money in the city that the salary seldom lasts from one pay day to the next. Here is a case in point: Seven years ago last March a young man hired to one of my neighbors for wages equal to \$180 per year. In six years he had saved \$600 and was the owner of 100 acres of land. Of course he did not get very rich or desirable land for \$9 per acre, but it is level land, capable of improvement, four miles from the county seat on a good road, and it will support a family. About the same time a man with a small family, engaged as bookkeeper to a grain firm at \$20 per month; he owned his own house, was not extravagant, yet recently mortgaged his home for \$400.

Are you going to do it? Do what? Why, plant that acre of cow peas. See what C. L. Willoughby says (RURAL WORLD, April 25): "A yield of hay larger and more palatable than clover or timothy, and at the same time build up the land."

I was glad to read that Dr. Morris said in the same issue in regard to acclimated seed, as I know the value of such seed to be much greater than that brought from the southland. Secretary W. W. Farnsworth, of the Ohio State Horticultural Society, told me last winter that he valued the cow peas he had secured much as does Mr. Robnetto of Missouri, and Mr. Farnsworth lives in Northern Ohio, twenty miles from the Michigan line.

Speaking of the Grouse bill, to regulate oleomargarine manufacture and sale, let me say that never will I vote for a man who opposes such legislation, nor will I ever support a man who by his opposition of the Loud postal bill, made it possible for my weekly mail to be filled with papers published solely for the sake of the transmission of dirty, low-down, filthy advertisements. More about this again.

C. D. LYON.

"LET WELL ENOUGH ALONE."

Editor RURAL WORLD: As a young farmer, trying to keep and encourage the keeping of pure stock of every class, from horses to hares, and wanting to know and follow the best systems under which to grow heavy crops from good seeds well nourished, I should be grieved at the removal of our Agricultural Experiment Station to western Tennessee. There has already been good work done for the farmers at Knoxville, but its removal would be a great loss to the state. The beginning of Prof. Soule's energetic and promising efforts in the wide field of general farming and stock raising. While farmers of this section are not so appreciative of the station's good work in their behalf as they ought to be, there has been marked improvement in late years through such influences. Now, since the Honorable Mr. Rosammon's labors have already proven so beneficial and successful in leading his neighbors into the light of profitable fruit-farming, let the experiment station bring not the righteous out there, "but the sinners" in Eastern Tennessee to repent of their scrubs and scrub ways. Laying aside all jokes, it can be readily seen that a station under the most perfect management in Knoxville can do in all respects a sure guide in details to fruit raisers of West Tennessee. Neither would it be possible to so locate a station that conditions of soil, altitude, rainfall, etc., would be exactly like those of all other sections interested in culture of the same crops.

At best, any station's work can only be for general outlines of practical work along progressive lines. Each, then, must fill in details as may best suit his peculiar soils, season, circumstances, etc. Granted that the station, being moved to a center in the fruit-growing district, proved entirely satisfactory from a horticultural standpoint, would it not represent a much smaller per cent of the state's agricultural interests than now along lines followed by most farmers not only in our eastern, but the other divisions? The writer would like very much to have some of the many knotty problems in poultry culture simplified by means of a local station, but we can't all ride our special hobbies at public expense. "I trow" that where \$1 comes into the state for fruit, poultry brings \$10, yet to the best of my knowledge there has never been a dollar or one hour of experiment station time used in promoting this, one of the state's most remunerative industries.

This station is not further from the capital than most states have theirs. Could it be supported then let our western Tennessee friends have one, but here is where a long, loud wail will come from against any attempt to take ours.

Let farmers in every part of the state rally to the support of Professors Soule, Koffer, Chambliss, in fact to the whole agricultural faculty of our State University.

MAPLEHURST.

Russellville, Tenn.

### MAINTAIN SOIL FERTILITY.

Editor RURAL WORLD: My ideal of a farm is one in a healthful locality, of rich soil and kept up in fertility to or above that state in which man found it; one that in an ordinary season smiles and dimples with fields of waving grain and rustling corn—checked with pastures, heavily coated with carpets of green, and meadows flecked with crimson crowns of clover as they billow to the breezes of June. Pastures and meadows are the reserve forces of the farmer, where rest and refreshment await the weary work animal, and the cow and sheep flourish and fatten without the farmer's aid. From 1875 to 1890 the farmers of eastern Henry Co., Mo., made five of the best crops of corn that have been made in the past 30 years. These crops could be safely put at 40 bushels per acre and the market price at 25¢ per bushel. The land was fresh and full of fertility. Corn was the crop, and most of it was sold. Few farmers plowed the stalks under. Those who fed stock never attempted to haul out the manure. The soil got nothing for its liberality.

These fine crops brought a great deal of money into the county; lifted many out of debt and others into good homes. But at what a cost to owners of the land and country! In the report of our State Board of Agriculture for 1899 it is stated that "it requires over \$20 worth of fertility to produce an average crop of corn per acre." That being so, the owners of the land were considerably behind and for proof of it, it is only necessary to look at the average crops since. If the two crops of 1899 and 1896 be excluded it is doubtful if the average crop would be much over 25 bushels per acre.

Prof. Mumford says in his article on "Soil Fertility," in the '99 report: "Take away the fertility of the soil and agriculture declines." It is true, light crops soon drive away prosperity, and the farmer gets small recompense for his labor and the use of his land. Young men begin to look elsewhere for more profitable employment. Improvement stops and the homes and farms show it in their unthriftiness. All suffer from this thoughtless neglect, the farmer, the feeder, the mechanic, the merchant, all directly or indirectly, because farming is the foundation of trade and manufacture.

While nature on every hand is showing that the earth may be fed and replenished by the excess of vegetable matter produced and returned to the soil, man goes on planting and stripping the earth of all he can use, with no thought of repaying, never realizing that his mother earth needs feed and clothing, and that she is continually striving to cover her nakedness and show by her countenance that she appreciates every morsel of nourishment he too grudgingly offers her. No investment is so certain of a profitable return as that made intelligently in the bosom of mother earth.

One and a half bushels of wheat sown on an acre of good land will give 30 in return; two bushels of oats will give 40 bushels, one-eighth bushels of corn will give 50 bushels. It takes but a small part of this gain to induce the soil to increase its efforts in favor of the husbandman. Cultivation means to improve the condition of the land, that it may increase the yield of its products. John Randolph, when called to order while making a speech for being too personal, said: "Mr. President, I was about to describe a portion of Kentucky that was poor by nature and rendered still worse by cultivation." Much of our western cultivation is of the same sort.

The farm journals are doing much to improve the condition and are ready and willing to do more as fast as their patrons are ready to receive it. The demand for farm products is likely to increase and the farmer, like the manufacturer, should get his machinery ready to supply the demand. Let us have practical examples of how to improve both the land and the crop, something like that of G. H. Turner's corn crop—what he did and how he did it. Let us know the shortest, best and most economical rotation for the benefit of owner and land.

We have seen it demonstrated in our immediate neighborhood by a judicious use of the means which are in every farmer's hands how the crop may be almost doubled in two seasons, and the quality greatly improved. Let us have practical experiments and plenty of them.

H. P. BROWN.

PEBBLES FROM THE POTOMAC.

Editor RURAL WORLD: It is reported that the scarcity of farm labor is causing considerable trouble in Shenandoah Co., Va., and in other sections of the state. In the vicinity of Woodstock the farmers are taking turns about helping one another in the work for which they are unable to secure laborers.

MAKING A FLOW.—The following facts from the Baltimore "Sun" can't fail to interest every reader of this paper: "Studies of the effect of machinery upon hand production, made by Carroll D. Wright, of the Labor Bureau, show that 52 men are now employed in making a plow against 2 in 1850. As respects the time required to make a plow, 1,180 hours were required by two workmen in 1850 in making 10 plows, while but 37½ hours are required by the 52 men now employed.

The reduction of time is as 31 to 1 in favor of machinery. Wages have risen from 40 cents to \$1.25 to \$2.00 a day, but even with these high wages the economy is about 8 to 1. The cost of the labor employed in making 10 plows is \$7.50 now, against \$54.40 in 1850. Labor has not been displaced, because it finds employment in making the machines that seem to displace it and the reduced cost of products has increased the demand. Every step of progress creates new demands."

CONGRESSIONAL ACTIVITY.—Affairs are progressing rapidly at the capitol these days, and the members of both Houses are as busy as the average farmer is at harvest time. The Senate has passed the agricultural appropriation bill, which carries in round numbers \$4,000,000. The committee amendment reducing the amount of appropriation for "printing, illustrating, publication, indexing and distribution of documents, bulletins and reports from \$18,000 to \$25,000 was withdrawn, strong opposition being made to this amendment by Messrs. Cockrell, Tillman, Allen, Berry, Spooner and others. Mr. Tillman offered an amendment, which was agreed to, appropriating \$5,000 to enable the Secretary of Agriculture to investigate and report upon the cost of growing hemp with a view of ascertaining whether it would be reasonable to introduce its culture in the southern states. He says the cotton planters of the South are practically at the mercy of the jute trust, which has a monopoly on supplying the covering of the cotton bales, and he hopes that eventually the jute monopoly might be found. The Arlington experimental farm receives a sum sufficient for its present needs.

WEALTH IN MISSOURI.—In a recent issue of the Washington "Daily Post" appeared an interesting interview with a gentleman from Kansas City, Mr. W. C. Brown—that is his name—has a good word for his home state and evidently has unbounded faith in the future of Missouri. He says: "Eastern capital is just learning that there is great wealth in the southern part of Missouri. We have the best mining property in the country. There is lead and there is iron. The iron is in the form of iron ore at the present time. Eastern men never knew this until a short time ago, and now they are flocking in. Our mining properties are for the most part in the hands of a little elbow grease, a pick, and a shovel, then he can go to work. If he strikes it rich, he can go to work. He can develop the mine. How is it done? The owner of the land, say 40 acres, subdivides it into mining blocks, all the same size. Then he puts up his notice. Any man can go onto the land, select his lot, and start to work. He must pay the owner of the land a small royalty, one fixed by law. This, of course, is done where the owner does not care who works the property. He frequently leases it to some particular person or persons. There are plenty of chances for a good man to take up a good claim. Our state is as yet in its infancy so far as mining is concerned. It is a field determined to become a full-grown community."

SPRING.—The withering blasts of winter are no more, and the gentle southern breezes sweep over hill and dale. The trees, as if touched by a magic wand, are clothed in garb of verdant green. The landscape is sprinkled with golden-gleaming buttercups and innumerable other members of the spring world. Adding to the realistic idyllic scene so sublime in the resplendent colors of early spring. Now the streams glide swiftly toward the mysterious deep, now meandering through quiet meadow land, now bounding angrily its path toward Neptune's domain. The woodlands on Virginia's distant shore are now a veritable picture of dreamy appearance, presenting a picture of surpassing beauty, impressing the beholder with an eloquence that can not be expressed in language. The whole scene is one of peace and contentment. One can spend a day in the merry woodlands, listening to the song of the birds or gathering wild flowers beneath the shadow of blue sky.

B. F. GILLESPIE.

Washington, D. C., April 8, 1900.

OUR LETTER BOX.

Subscribers will please ask their questions as briefly as possible, and on a separate piece of paper. Give full name and address. Answers may be given in the department to which they belong, in subsequent issues, if not given with the question.

LEWIS CO., N. E. MO.—Crop prospects were never better at this season of the year than now. This has been a propitious season. Just enough rain. Ground works splendidly. Corn about all planted and some of it worked over. A large acreage of oats sown and looks fine. Wheat good. Fruit of all kinds OK.

G. W. WATERS.

CHRISTIAN CO., S. W. MO.—Corn is all planted and is being plowed. We have had an exceedingly dry spring which has given farmers a good chance to get their crops in early. We had a good rain last night, which was badly needed. It is thought that wheat and oats have been cut short by the dry weather. Pastures are a little short also.

May 7. W. FRANK VAUGHAN.

RANDOLPH CO., N. E. MO.—There is a small acreage of wheat in this county, not much more than this has been planted of the wheat crop being almost a total failure heretofore. The prospects are very flattering for a good crop at present. I sowed some spring wheat and barley. I will let the RURAL WORLD readers know what was my success with them. The grand old RURAL WORLD is the best paper for the farmer and stock raiser that I ever saw.

E. H. HURST.

May 8.

BLUE GRASS (Poa pratensis)—I enclose a head of what I have been calling blue grass, but which some of my neighbors say is not, what do you say? Whatever it is it is surely a very fine pasture grass and much more plentiful than usual this spring. Where it is not pastured too close it is knee high and all headed out.

G. H. HOVEY.

Ripley Co., Mo.  
The specimen was referred to Mr. J. B. Norton of the Missouri Botanical Garden for identification. He pronounces it blue grass (Poa pratensis).  
SCOTLAND CO., N. E. MO.—We have had a fine spring for farming. Oats and grass are looking well and promise good yields. The larger part of the corn is planted and is coming up. Fruit of all kinds will be plentiful.

H. T.



Following is the Grout bill (H. R. 3717),  
and the RURAL WORLD again earnestly  
expresses the wish that it be enacted into  
law:

And what abundant return the cows

ing 5.6 percent of fat. The second one gave 6,000 pounds of milk, containing 4 per cent of fat. The third one gave 4,600 pounds of milk, containing 3.8 per cent of fat.

Had the first cow's milk been made into

utes a free use of the spade will reduce them to small pieces, which the cows can eat with relish. When first broken open scoop out all of the inside part, thus removing the seeds, which sometimes prove dangerous to the cows. Put the seeds and

**IOWA'S DAIRY INDUSTRY.**

The value of Iowa's dairy products

**No. 5**  
**Four Horses**

**For Gang**  
**Sulky Plows**

Works one horse in furrow and three on sod. Satisfaction guaranteed. First order from each place at wholesale price. Write us for printed matter prices. **D. M. EVENER CO. D.**

**FARMS.**

---

**FOR SALE!** 100 acres highly improved stock and dairy farm, one mile of the State University, For details

**SOUVENIR VIEWS EN ROUTE TO CALIFORNIA VIA UNION PACIFIC RAILROAD.**

We have just received from the Union Pacific Railroad a beautiful publication containing forty colored views of scenery between the Missouri River and California. This is one of the most artistic publications ever issued by any railroad company. The name will be mailed free on receipt of 4 cents in stamps for postage, on application to J. F. Aglar, General Agent, St. Louis Mo. It is well worth

Coe Chem. Co., Cleveland, O.

**160 Acres** Irrigated Allain land, 800 ft. fruit trees, good house, bath, etc. near town of Allain, S. D. neighborhood in Western Kansas for sale or lease. Comfortable home, an excellent stock business in Western Kansas, where corn, alfalfa, wheat, etc. are raised. 70 to 75 per cent on capital invested. Farms here property and stock can be sold and exchanges from Iowa to the Gulf.

**BONES & HOPKINS,** Birmingham, Ala.

**WHERE TO GO! WHEN TO GO!**  
**And How to Attain Beautiful Luxurious Homes**

In the most famous city in the world, locally known as the center of all questions concerning Home-Seekers. The PAVERTY VALLEY KANSAS CITY REAL ESTATE BUREAU has been established and assistance in solving and settling all real estate problems. Write for literature.



## Horticulture.

The University of the South, at Sewanee, Tennessee, has placed its 6,000-acre tract of hardwood timber near that town under the management of the Division of Forestry. An official of the Division will mark all trees to be cut and will draw up the logging contracts to provide for the preservation of young growth. It is intended to make the forest yield a permanent annual revenue to go toward the support of the college. Another interesting tract is one of about 47,000 acres, owned by the Adirondack League Club. It is in the Adirondack Mountains of New York, near Lower Saranac, and is kept primarily as a game preserve. The working plan will provide for the removal of all timber which can be spared without injuring the forest.

### THE STRAWBERRY.

Editor RURAL WORLD: There is no crop with me, occupying so small an area as the strawberry, that gives anything like the profit as does this prince of fruits. The fact that I have a home market in which I can sell 200 worth of berries in a season without any further expense than the boxes, and cost of picking is one very encouraging feature of the business. Our soil seems to be peculiarly adapted to the growth of strawberries, and they are a crop that very seldom fails here. We will have ripe berries by May 12. All fruits have set better here this season than usual.

My intention was to set an acre to strawberries this spring, but the building of a summer kitchen for the nation threw me out of line with my field work. Now, I shall prepare the acre for fall planting. I will probably not lose much time by this method over the spring planting, as I can fertilize and cultivate the plot all summer and have it in splendid condition for fall planting. I do not know that I will get as large a crop of berries by fall planting as I would have gotten had I planted this spring. I set a small bed last year in May, shortly after picking time. The weather was so warm and dry that the stand is poor, but the crop of berries will be almost equal to the one had.

While I believe that February and March are the ideal months to set the new beds in this locality, I believe that I would lose valuable time by waiting. Better take time by the forelock and plant this fall. Usually when the fall rains set in, the ground is in a favorable condition to plant, and especially if it has been autumn. If we have sufficient rain (as we usually do in May-making time) for the development and setting of the new plants, I will have more vigorous young plants to set with me than I had last May. I used the old plants then, one cause of their fruiting so well this year. The advantage and valuable features of strawberries growing are the quick returns for labor expended and comparatively small cost of marketing the crop, where we have the advantage of a good home market.

I have three and four-year-old trees—Wend Goose, Damson, Abundance and Burbank plums—all have set some fruit except the latter, cherries and pears, some six kinds of each, three and four years old, a great many of which have fruit on now. I have also a three-year-old vineyard of Concord and Worden grapes that will yield a heavy crop this year. The grape is next to the strawberry in bringing quick returns, and when rightly cared for will last a lifetime.

When we succeed in raising a fine, large crop of small fruit, how are we to find the buyers? Some will ask. That is about as important a part of the business as the production; the knowing how may be a gift with some, and the outgrowth of practical experience with others. Be that as it may, here is the way I find them:

Farmington is in sight of my place—only a 15-minute drive; population, 1,500. Flat River District, one hour's drive, has 10,000 fruit hungry people living there. All the merchants in Farmington will handle our berries for the per cent on their goods, giving us a due bill for the berries. They will also give one-half cash for them. For consignments of state berries, they must pay all cash. Ours are delivered same day picked. We sometimes canvass the town as we do at the mines, taking two small sharp-witted boys along, giving each a basket and four boxes of berries. While I drive through the streets with the spring wagon and the crates of berries, the boys go from house to house, one on each side, giving everyone a

chance to buy, and telling all that we will be around again to-morrow or next day, as the case may be. You would be surprised to see what a trade we work up before the season is over. The only trouble with us is we can't supply the demand.

St. Francis Co., Mo.  
E. W. GEER.

### NOTES FROM THE MICHIGAN FRUIT BELT.

Editor RURAL WORLD: The RURAL WORLD arrived this first week of May on the crest of a cold wave. For three nights ice formed one-quarter to one-half inch in thickness. It is our usual May "cold snap," though somewhat severe than the average. Happily fruit buds are not developed to be injured, and a good crop of peaches is once more in prospect. As other fruits are also promising abundantly.

Insect pests are awake and active. Farmers are hustling with the spray pump to defeat their destructive ambition. Speaking of spray pumps, the people of our town are justly proud of one of their number, M. L. Johnson, who has recently been granted a patent in this country and in Canada, for what is claimed to be the most effective and easily worked machine of the kind in the market. It is a new yet to have made an extensive acquaintance, though locally it has been satisfactorily tested, and everywhere its capabilities have only to be illustrated to gain immediate favor. Soon it will be seeking public attention through the advertising columns. I am calling Mr. Johnson's attention to the facilities of the RURAL WORLD in this line.

Cut-worms are everywhere in evidence. Newly set trees are fortified against their attacks by tufts of cotton batten, paper funnels, stripes of printer's ink, or other like protection; but this spring they are so numerous as to threaten the old trees and eat out the buds. If the cold wave continues they will do an immense amount of injury. Last year some sort of foe was found to be killing the plum trees. One progressive grower set out in earnest to ascertain the cause and discovered numerous patches of gray scale on the trunk and limbs, samples of which he sent to the experiment station and learned that it was the Putnam scale. Meanwhile he sprayed thoroughly with kerosene emulsion, steadily increasing the proportion of oil, till at length he was using clear kerosene on the body and limbs only. This seemed effective, destroying numerous larvae that appeared in abundance under the large limbs near the trunk. When the orchard inspector was sent to examine the work of the pest in this section, he said to the farmer: "You have been killing your friends. The large larvae are those of the lady-bug, which are always to be found where scale insects exist, and feed upon them." The scale is microscopic. The farmer was shown them through the inspector's microscope and admitted that they are round white bodies. They suck out the sap from the tissues, leaving the wood rough and porous, and brittle like an icicle, leaving no splinters when broken. The pest is so inconspicuous that it gained a strong foothold and was only discovered by the ruin it had wrought.

In the old home in western New York the tent caterpillars have begun the season's campaign in immense armies. The people are crying out loudly against their depredations. Their legions are attributed to neglected shade trees, where they have been left to perpetuate their kind unmolested. We have a liberal supply of them here in Michigan. Another pest that is proving most vexatious in the east is called the new cherry insect. It will lack the usual enterprise of its kind if it does not speedily follow the star of empire westward. The most annoying feature of this late comer is its manner of hiding its damaging work in the fruit, so that it cannot be detected when preparing it for market. No adequate remedy against it has yet been discovered. A bulletin devoted to its treatment has been issued by the Cornell Experiment Station.

These are only a few early arrivals of the many enemies the fruit grower will have to contend with as the season advances. He will get enough of this kind of warfare to cause him to feel like a veritable soldier. He will add the constant round of labor involved in cultivating, pruning, thinning, harvesting, etc., and it is evident that he has not chosen the position of a sinecure. M. A. HOYT, Oceana Co., Mich.

SPRAYING MIXTURES.

WHITE ARSENIC AND SALT SODA.—The best of all arsenical poisons, and one that should supersede all others for insects that may be killed by eating, was discovered by Professor Kodol of Mexico. It is made by dissolving together white arsenic and salt soda. It is the up-to-date mixture for this class of insects. There is nothing difficult about making or using it. It is cheaper than any other kind and is more effective. The materials can be bought at any village drug store. Nor is it patented. This is the way to make it:

Procure one pound of powdered white arsenic and four pounds of common lump salt soda. The powdered salt soda contains more water than that which is in large, lump crystals. Put them both in any old pot, add one gallon of hot water and boil for ten or fifteen minutes. This completely dissolves the two, and forms a clear liquid which has no sediment in the bottom. Put this in a jug, label it POISON in the plainest manner and lock it up securely, where there is no danger of any one getting at it by mistake.

The cost of this mixture is about 25 cents. The arsenic should not cost over 15 cents, and it may be had in large quantities for less than 10 cents per pound. The salt soda is usually worth about one cent per pound, but we will make a liberal allowance and estimate the cost of both ingredients at 25 cents. This is equal in killing power to two pounds of the best Paris green and costs less than half as much. Some who have tested them in cooperation say that the white arsenic and salt soda mixture is worth four times as much, dollar for dollar. It is certain that the one gallon will poison ten forty-gallon barrels of water sufficiently to kill all insects that may be induced to eat it. Nor will it injure the foliage if lime is used at the rate of one pound per barrel of water. The lime will cost about half a cent more, which brings the entire cost, exclusive of a little labor, to about three cents per barrel. Certainly, this is cheap enough.

When the time has come to spray take from the jug a little less than a pint of the arsenical mixture for each forty-gallon barrel of water or one pint for a fifty-gallon barrel. When it is well stirred it is

ready for the lime water. This may be made in advance also, letting the lime thoroughly slake and then put on enough water to make milk of lime of it, or thoroughly saturated lime water. The coarse particles will all settle at the bottom, so there will be nothing to obstruct the flow of the mixture in spraying. Dip off one-tenth of the lime water for each barrel of poisoned water and when the two are mixed all is ready for applying. The lime counteracts the caustic properties of the arsenic and the white sediment on the foliage shows where the spraying has or has not been well done.

MODERN BORDEAUX MIXTURE.—We are constantly learning something new about our work, and one of the best things is how to make a Bordeaux mixture that will not settle quickly or clog in the spraying machines. There is much trouble in these respects by the old methods of mixing the chemicals in concentrated solutions instead of in diluted form.

Whether there is much or little spraying to be done, it is best to prepare in advance, stock solutions of lime and sulphate of copper, these being the two ingredients used in very dilute form in water to make Bordeaux mixture.

It must be to be used, sink a barrel nearly to its top in the ground. In this put a bushel of fresh lime and cover it with water. As it slakes add more water and stir to the bottom until there is a mass of paste. Keep this covered with water and it will keep indefinitely and always be ready for use.

In another barrel with wooden or copper hoops (never of iron, which will corrode), put as many gallons of water as you may be desired. For each gallon put in two pounds of sulphate of copper. Stir this in a coarse sack and hang it just under the surface of the water, so the water will all be saturated with the chemical. In a small bottle put about five cents worth of ferro-cyanide of potassium, and then fill it with water. All is now ready for making the Bordeaux mixture, but do not do it until the hour the spraying is to be. The separate solutions may safely stand indefinitely, but when mixed they soon deteriorate by a chemical union that causes a precipitate.

Another very important point in making Bordeaux mixture is that the two materials should be diluted as much as possible before putting them together. When they are mixed in concentrated forms and then diluted they settle rapidly, but when diluted before mixing there will be very little settling for several hours. No agitation of the liquid will be required other than the motion of the tank or barrel in going from tree to tree while spraying.

All being ready to do the work, put 40 gallons of water in a 40-gallon barrel, or in about that proportion for a smaller or larger tank that may be used. Dip from the vessel containing the saturated copper solution two gallons, which will contain four pounds of sulphate of copper, and pour it into the 40 gallons of water. Then pour several gallons of water in the vessel containing the lime and stir it until milk white. Dip out two gallons of this liquid and pour it into the new mixture, stirring it rapidly, until it is all alike. Then drop a little of the ferro-cyanide solution from the bottle into the mixture and if any brown color appears add a little more lime and test again, and so on until there is no such color. Too much lime will do no harm, but too little will permit the copper sulphate to injure the leaves. The barrel or tank may then be filled to the top with water and the spraying be done.

### THE SEEDLESS ORANGE.

History of the Introduction of This Fruit into the United States.

Concerning the origin of the seedless or navel orange, its introduction into the United States, a citizen of Pomona, California, writes as follows: The first seedless orange trees were apparently freaks of nature. Their counterparts have never been found. In the summer of 1872 William F. Judson, United States Consul to Bahia, Brazil, heard an account from natives of the fact that in the swamps on the north bank of the Amazon, sixty miles inland, that bore oranges without seeds. He was of scientific bent and a Consul that knew his business. He had heard of the starting orange groves in Florida, and he believed that seedless orange trees were well worth experimenting with there. He sent a native up the river to cut some shoots of the trees and get some of the fruit.

When the native returned, the Consul was delighted with the specimens. Forthwith he sent six of the orange tree shoots, carefully packed in wet moss and clay, to the Agricultural Department at Washington for propagation. The trees did not excite as much attention at the department as the enthusiastic Consul had expected. Two of the shoots, which were no bigger than horsewhips, died of lack of care in the department grounds, and the others were almost forgotten in a few months. In the winter of 1873 Mrs. Horatio Tibbets, a native of Maine, was visiting the family of her cousin, Benjamin F. Butler, then a Congressman from Massachusetts. Her husband had recently removed from Boston to Los Angeles, Cal., and was about to pre-empt a tract of government land in the San Bernardino Valley.

The scheme was an uncertain one, but he intended to grow semitropical fruits there. He asked Mrs. Tibbets to get from Gen. Butler an introduction at the Agricultural Department. She was then to ask for specimens of fruits and shrubs suitable for experimental propagation in Southern California. Among other things Mrs. Tibbets got from the department ground the four surviving orange tree shoots from Brazil. The trees reached Mr. Tibbets safely at Riverside, Cal., a week later and were immediately planted. That was in December, 1873. One of the shoots died from neglect, and another was broken and chewed up by a cow.

Five years passed, and the two surviving trees came into bearing. In the winter of 1878-79 they bore 16 oranges, the first seedless oranges ever grown in North America. The specimens were carried about southern California and shown to all ranchmen and fruit growers. There were many who doubted whether the trees would answer such royal specimens of orange culture. Nearly every one believed that the fruit would become coarse and tough in a few years more. So the second crop was awaited with curiosity among the neighbors. There was about a box of oranges in the second year, and they were even better than those of the first crop. The fame of the Tibbets seedless oranges went far and wide in Southern California. People who were growing the old-fashioned oranges traveled hundreds of miles in

wagons to see the trees. Still there were less than half a dozen people, who believed that such a freak as a seedless fruit could ever be propagated into an established industry.

Mr. Tibbets was sure that there was a flow in his new variety of oranges. For two years he experimented with propagating trees from shoots and cuttings from his two seedless orange trees. But all his attempts were failures. Finally he hit upon the scheme of budding from the seedless navel trees upon seedling trees. Experiments along the line were successful. It was found that a bud taken from one of Tibbets' two navel orange trees and grafted into the bark of a seedling tree would grow to be a limb, which bore seedless navel oranges. Then Mr. Tibbets grew tiny seedling orange trees, just as has been done by orange growers for ages, and budded into the trunk of each little tree several navel orange buds. When the buds had become branches of the trees, he cut away all the original or seedling branches, leaving only the navel orange branches to bear fruit. In this way he created navel orange trees, and the problem of growing seedless oranges was solved.

The planting of groves of seedless orange trees propagated from buds from the two original trees on the Tibbets place began in earnest throughout southern California in the winter of 1882. In the following year the demand for buds from the Tibbets trees was so large that a dozen buds sold frequently for \$5, and some growers, desirous of getting navel orange buds of genuine quality, paid \$1 each for buds. In 1884 the two Tibbets trees furnished \$300 an acre, while there was a tall fence was built about them to keep people from stealing buds.

A year or two later the orange trees that had been propagated from the Tibbets trees began to bear, and they furnished tens of thousands of navel buds as good as those from the two original trees. Then the first navel orange groves began to bear fruit, and from that time the boom in navel orange groves has continued. No one plants seedling orange trees nowadays, and tens of thousands of seedling trees have been budded into navel orange trees. The average returns from seedling orange groves in Southern California during the last ten years have been less than \$100 an acre, while there are many navel orange groves in this region that have yielded net profits of \$250 and \$300 an acre a year. The two trees from which have come directly and indirectly all the navel oranges in the world are still on the old Tibbets ranch in Riverside.

SPROUTING OF PREHISTORIC SEEDS.

An extraordinary feat, which is calculated to cause a stir in botanical circles, says the London "Mail," has been observed by Col. Thompson during the past two years, and is now made public for the first time. A little plant called Pilea carolinensis, has constantly come up in the pots in which jadoo fiber has been used, and as this plant is a native of the West Indies and tropical America, it is clear that it comes from the moss, which is obtained solely from Yorkshire, and which is used in the preparation of jadoo, though in this climate the pilea can not grow in the open air.

The surprise of the Colonel is that the seed was deposited in the moss countless ages ago, when a tropical climate prevailed here, similar to what it is in the miocene period, when the celts or nettle tree, the bread fruits, and the giant cat flourished in Britain. If his conjecture is correct, we have some extraordinary evidence in favor of the great vitality of seeds, far surpassing anything that has been advanced in this connection before, including that furnished by the sprouting of the "mummy wheat."

The pilea genus is a most extensive one, and well known to be broadly scattered over and confined to the tropics. It is a curious coincidence that the temperature at the period referred to, when the palm flourished to perfection and tropical forests at Bournemouth overlooked a lagoon, has been put at 70 degrees by eminent geologists, and it is at this same temperature that the pilea seeds were observed to have been awakened from their long sleep.

Its appearance unexpectedly in the Yorkshire moss when potted and placed in the hothouse is certainly most interesting, and the subject is sure to be debated by scientists during the next few months.

### SOUTH MISSOURI ORCHARDS.

"The fruit prospects in our part of the state, which, as you know, is called the 'land of the big apple,' are very fine," said Senator Orchard recently while in St. Louis. "Both peaches and apples promise unusually well, and while there have been a few frosts, the temperature at the period referred to, when the palm flourished to perfection and tropical forests at Bournemouth overlooked a lagoon, has been put at 70 degrees by eminent geologists, and it is at this same temperature that the pilea seeds were observed to have been awakened from their long sleep."

One of the most old-looking pear trees stood in my garden last summer. This tree, having failed to put out leaves of its own, Dish Rag gourds were planted around it, which in a short time completely covered the tree with beautiful dark green foliage and the brightest yellow flowers imaginable, as large as morning glories. Later in the season, the odd-looking gourds hung from every limb, some of them nearly two feet in length. While the garden contained many plants that assisted in making the place ornamental and interesting, nothing attracted quite so much attention as this tree with its borrowed foliage and fruit. Not only the Dish Rag gourds on the tree, but the interior membrane of the fully matured gourd is a very useful article. This membrane is equally as durable as a sponge, and for many purposes superior; for washing hands or cleaning flower pots nothing is better.—Edwin H. Hiehl in Vick's Magazine.

### EGG PLANT.

Have you ever raised the egg plant? If not, you have deprived yourself of a great luxury. I admit that, possibly, it is necessary to acquire a taste for this vegetable, but that is very easily done. Mr. Vick tells an amusing story of his experience in that way. He had always perished that he did not like egg plant, and no persuasion could induce him to try it in his own home. Last summer, when taking dinner with Mr. W. Albee Burpee, at Fordhook, Pa., he ate heartily of one particular dish to which he was helped. Mr. Burpee asked if he would have some more egg plant. "Oh, no!" said Mr. Vick. "I never eat egg plant." This statement brought out the fact that the dish which he had especially enjoyed was of that much despised vegetable. Since that time, Mr. Vick has gladly welcomed the egg plant to his own table, and in answer to his request Mr. Burpee has kindly furnished the recipe by which it was prepared in such an appetizing way. It is as follows:

Cut in thin slices, pare and sprinkle each slice with salt; press out all juice by placing between two plates with a flat-iron on top. Dip in cracker dust, or bread crumbs, and egg, and then fry in lard.

Egg plants are not difficult to raise, only care is necessary in transplanting, which should not be done until danger from frost is over. The Improved New York Purple is a favorite variety.—F. B. in Vick's Magazine.

### 1900

There is every good reason why

### St. Jacobs Oil

should cure

RHEUMATISM

NEURALGIA

LUMBAGO

SCIATICA

for the rest of the century. One permanent reason is—it does cure.

SURELY AND PROMPTLY

for the rest of the century. One permanent reason is—it does cure.

ADVERTISEMENTS & MISCELLANEOUS.

REYNOLDS & MCKEY

DAVID CHAMBERLAIN

FAIRBANKS

AMERICAN

ROCKEY

ATLANTIC

BRADLEY

ROCKEY

NEW YORK

UNION

SOUTHERN

COLLIER

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

REYNOLDS

EMPLOY A practical painter. There's no economy in buying ready-mixed paint and employing a tramp to slather it on. The experienced painter will tell you that if you want paint which lasts you must use **Pure White Lead**. To be sure that it is pure, see that the packages bear one of the brands named in margin.

For colors use National Lead Company's Pure White Lead Tinting Colors. Any shade desired is readily obtained. Pamphlet giving full information and showing samples of colors, also pamphlet entitled "Uncle Sam's Experience With Paints" forwarded upon application.

National Lead Co., 100 William Street, New York.

### WHY PAY \$60.00 MORE

for a survey than is actually necessary. If you buy a job as good as good from a dealer or a good one will charge you less than \$10.00. We are the largest manufacturer of Vehicles and Harness in the world selling to the consumer exclusively.

WE HAVE NO AGENTS.

We make 12 styles of vehicles and styles of harness and ship anywhere for examination, guaranteeing each delivery. You can see our work in person at our factory, or we will send you a copy of our large illustrated catalogue.

Elkhart Carriage and Harness Manufacturing Co., Elkhart, Indiana.

### PEAS and MILLET

We offer the above articles for sale at the following prices:

Whippoorwill Peas.....\$1.40 per bu. Prime German Millet.....\$1.30 per cwt.  
Black Peas.....1.60 Choice Reclaimed Millet, \$1.50

Consign us your WOOL, there is a good demand here and we will place it at full quotations. ST. LOUIS COMMISSION CO., 11 N. Main St.

### SEEDS THE ALBERT DICKINSON CO.

GRASS SEEDS, CLOVERS, FLAX SEED, LAWN GRASS, BEANS, PEAS, POP CORN, BIRD SEEDS, BUCKWHEAT, SAGE, ETC.

OFFICES, WEST BAYARD ST. AND THE RIVER, CHICAGO.

### DO YOU WANT A FARM

OR A RANCH? 7,000-acre Ranch land—1,000-acre Farm land, located in NEBRASKA, KANSAS, COLORADO, MONTANA, WYOMING AND UTAH. For sale by the UNION PACIFIC RAILROAD COMPANY at REDUCED PRICES. Time and only 1 per cent interest. LIBERAL DISCOUNT FOR CASH. Please refer to this paper when answering all inquiries. J. H. MORTIMER, Local Commissioner, U. P. R. Co., Omaha, Neb.

FOR SALE, SOY BEANS. Northern grown, acclimated.

POLAND-CHINAS—Boy Wilkes, Black Chief, Teacup, Perfection Chief in beans. Mammoth Imperial Peas in Docks. Write at ONKOWETH BROS., Lathrop, Clifton Co., Mo.

### SAMSON GALVANIZED STEEL

SOMETHING ENTIRELY NEW

and as its name indicates, is the strongest wind mill made. Tested a whole year under careful scrutiny. Note strong double gear in right hand cut. Perfect under line and gives a direct lift to the load—no tireless, overhauling strain on the windmill. It is the only mill that will run without stopping, and will not be blown away by the wind. Do not buy until you get free circulars of Samson and our prices. STOVEN MANFG. CO., 534 River St., Freeport, Ill.

### The Apiary.

THE ESSENTIAL CONDITION OF A HONEY CROP.

Editor RURAL WORLD: This spring, I think, has opened very favorably for a good honey crop. I have never known a year yet, when if the maple and elm blossoms escaped the frost, we didn't have large and very early swarms. Take a year that bees swarm in this locality and we expect at least one-half a honey crop, when these are manipulated in the right manner.

Where no increase is wanted and honey is the object sought for, I recommend and use the following method: Have your bees confined to the brood chamber during the winter and spring months, for it makes them much warmer and thus facilitates brood rearing. Supers should not be placed on the hives before the white looking gourds hang from every limb, some of them nearly two feet in length. While the garden contained many plants that assisted in making the place ornamental and interesting, nothing attracted quite so much attention as this tree with its borrowed foliage and fruit. Not only the Dish Rag gourds on the tree, but the interior membrane of the fully matured gourd is a very useful article. This membrane is equally as durable as a sponge, and for many purposes superior; for washing hands or cleaning flower pots nothing is better.—Edwin H. Hiehl in Vick's Magazine.

### EGG PLANT.

Have you ever raised the egg plant? If not, you have deprived yourself of a great luxury. I admit that, possibly, it is necessary to acquire a taste for this vegetable, but that is very easily done. Mr. Vick tells an amusing story of his experience in that way. He had always perished that he did not like egg plant, and no persuasion could induce him to try it in his own home. Last summer, when taking dinner with Mr. W. Albee Burpee, at Fordhook, Pa., he ate heartily of one particular dish to which he was helped. Mr. Burpee asked if he would have some more egg plant. "Oh, no!" said Mr. Vick. "I never eat egg plant." This statement brought out the fact that the dish which he had especially enjoyed was of that much despised vegetable. Since that time, Mr. Vick has gladly welcomed the egg plant to his own table, and in answer to his request Mr. Burpee has kindly furnished the recipe by which it was prepared in such an appetizing way. It is as follows:

Cut in thin slices, pare and sprinkle each slice with salt; press out all juice by placing between two plates with a flat-iron on top. Dip in cracker dust, or bread crumbs, and egg, and then fry in lard.

Egg plants are not difficult to raise, only care is necessary in transplanting, which should not be done until danger from frost is over. The Improved New York Purple is a favorite variety.—F. B. in Vick's Magazine.

###







## Horseman.



Terre Haute, Ind., holds a first-class trotting and pacing meeting July 3, 4, 5, 6. Purses for \$1,000, \$500, \$250 are offered for different classes. Entries close June 4th. Are owners of trotters and pacers preparing to make their best horses a race there and elsewhere. No better track for training can be found in the West. There should be a great meeting there the first days of July. W. P. Jams is the president and Chas. R. Duffin secretary, who will give all information.

Now for Moberly and Columbia, Mo. Missouri horsemen are turning their eyes longingly to these two enterprises. They place in the near future. The officers of both associations are putting their tracks in the best order, and the stables and grounds in the best condition to please horsemen. Those who expect to make entries can go to either place and train and prepare for the contests. These two associations have done their full part. It is now left for the horsemen to say whether they will enter and co-operate to make two great summer meetings. If they prove successful now, a precedent will be established for the future which will be much to the credit of the horsemen. We hope there will be large lists of entries. J. R. Lowell is secretary at Moberly, and N. D. Robnett is secretary at Columbia, who will give all requisite information.

St. Joseph, Mo., has a summer race meeting worthy the attention and support of horsemen. It takes place July 3 and 4 and continues four days. Six purses for \$500 each are offered for trotters and pacers. Running races will also take place daily, entries to which are made the night preceding the races. These races will take place on the beautiful new grounds at Lake Contrary. These are probably the nicest grounds in the state of Missouri for a race meeting. Everything is being put in first-class order and it is hoped that this is the beginning of a new era for prosperous trotting meetings at St. Joseph. Let every horseman read the program advertised in these columns and then make entries to Palmer L. Clark, assistant secretary, St. Joseph, Mo.

The first matinee of the Gentlemen's Driving Club at Forest Park took place on Saturday afternoon. On account of the strike on the electric car lines the attendance was not large. The heats were only for one-half mile. Results:

Free-for-all race: Specter, b. g. (Bonner-Miller).....3 1 1 Lady Helen, blk. m. (John P. Marshall).....3 2 2 Will Hal, b. g. (W. G. Hallahan).....3 3 3 Time—1:34.5, 1:31.5, 1:29.5.

Free-for-all trot: A. W. Harper, b. g. (Clem Welch).....1 1 1 Swain Glenn, b. g. (Edw. Cornett).....2 2 2 Alpha Wilkes, b. m. (Colman Stock Farm).....3 3 3 Time—1:31.5, 1:29.5.

Free-for-all pace: Ballou, blk. m. (W. H. Ritter).....1 1 1 Norman J. b. g. (F. H. Callahan).....3 1 1 Monmouth, b. m. (Colman Stock Farm).....2 2 2 Hero W. b. g. (W. C. Eyster).....4 4 4 Mary C. b. f. (H. B. Schaffer).....5 5 5 Time—1:28, 1:25, 1:24.

For a considerable number of years the trotting horse business in all its departments has been under a cloud. Every branch of the business has sympathized in the depression and none more than the journalistic branch. It is cheering to note, however, says the "Stock Farm," that this depression is now rapidly disappearing. The signs of this much desired change have been accumulating for several years. Now they have become so numerous and so decided that the future of the trotting horse (including, of course, the pacer) is again assured. We once more tread upon firm ground, and there is apparently no good reason why this condition should not be permanent. There is now every indication that trotting horse breeding and development should be a profitable business for a considerable number of years. The causes that led to the terrible depression of 1898, and the immediately succeeding years, do not now exist, and cannot soon be repeated. The market is now much enlarged. At that time the foreign demand was very limited. Now it has swelled to mighty proportions. Every year brings hundreds of customers for our horses from foreign shores and every year thousands are carried to distant lands. The almost entire cessation of breeding during this interval has removed any danger of overproduction, and has yet left us enough of the old stock with which to continue breeding operations.

In looking over the table of broad-breasted horses which have produced two or more 2:15 performers, in the last number of the "Horse Review," I was struck, says a writer in the "Horse World," with the great number of them which had produced their 2:15 performers to the cover of stables possessing the blood of George Wilkes. Out of the 106 mares in the table, 60 have produced one or more of their 2:15 performers to the cover of stables possessing a strain of Wilkes blood. Another feature of the table is that eight of the 12 Wilkes mares in it have produced one or more of their 2:15 representatives to the cover of Wilkes stallions, thus showing the good results attained by inbreeding in the Wilkes family. One of these mares is China Wilkes, by Adrian Wilkes. She is the dam of L. L. D., 2:06; Oenone,

2:14; and Jenny Wilkes, 2:15; all by Woodford Wilkes—not by Adrian Wilkes as the "Review" states. Both Adrian Wilkes and Woodford Wilkes are sons of George Wilkes. Another is Grace Kaiser, dam of Coney, 2:07; and McZeus, 2:13; both by McKinney, grandson of George Wilkes. Kaiser, her sire, is a son of George Wilkes. Ione Wilkes, by Red Wilkes, son of George Wilkes, produced Billy Toler, 2:06; and Bert Oliver, 2:06; by Ashland Wilkes, a son of Red Wilkes. Cathlam, by George Wilkes, produced Pligrim, 2:04; and Pastoral, 2:13; to Onward, son of George Wilkes. Willie Wilkes, by George Wilkes, produced Rachel, 2:06; to Baron Wilkes, son of George Wilkes. Carrie Wilkes, also a daughter of George Wilkes, produced Bay Baron, 2:14; by Baron Wilkes, and Effie Davis, by Red Wilkes, son of George Wilkes, produced Lord Sumrall, 2:14; by Don Plarzo, grandson of George Wilkes, and Gowan, 2:13; to Gambetta Wilkes, son of George Wilkes. Only a few sires are represented by more than one daughter in this list and it is therefore plain to see that those with more than one daughter in it are entitled to more than ordinary honor. Those having this distinction are: Nutwood, 2:19; with four daughters; Mambrino Patchen, with three; Red Wilkes, with three; Blue Bull, with three; George Wilkes, 2:22; with two; Mambrino King, with two; Harold, with two; Arthurton, with two; Mambrino Abdullah, with two; Mambrino Starline, with two. The full significance of a table of mares which have produced two or more 2:15 performers is more apparent when we remember that it was only a few years ago that a mare's greatness as a producer was measured by the number of her produce in the 2:30 list.

## L. E. CLEMENT ROASTS ICONOCLAST.

There are some things that are strange, and among the strangest are some of the happenings that have come to me of late. Iconoclast, at the close of a personal letter dated March 11th, closes in this way: "You will notice in the last issue I give you a little friendly shot, an occasional controversy being the 'life of trade'."

In the issue of May 10th, 1900, I find the following: "I confess that it is a little difficult to carry on much of an argument with a gentleman who regards the 'life of trade' as a greater sire and progenitor than Hambletonian, and who believes that Woodford Mambrino will soon take the lead of George Wilkes, has views so different from those of the majority of horsemen that anything like an argument is impossible. There are in my judgment quite a number of sons of George Wilkes that are now in advance of Woodford Mambrino, and are growing on him to-day and always will be growing on him, notwithstanding the advantage that Woodford Mambrino has point as a sire. "After reading the 2:15 list of the daughters of Blue Bull persuasion would have refrained from making themselves ridiculous by making up in imagination. Facts of small importance to him. They don't affect him at all, and the more absurd a contention may be, the more he clings to it. It would have seemed to many people that it had been Mr. Clement's desire to win his faith to a great extent by his selection of Brown Hall, who is the foremost that the world has ever seen. But the Knight of Blue Bull pays no attention to considerations that affect other men. He has fixed his ideal standard and one couldn't pile up facts enough to induce him to vary his hair's breadth. With him the 2:25 pace still remains just as good as the 2:10 trot."

## MAMBRINO, JR.'S, GOSSIP.

Editor RURAL WORLD: This is the third Sunday after Easter and raining to beat the band. It is a much needed rain in these parts. It has been dry for nearly three weeks. Vegetation was not particularly suffering for water, but the roads were getting hard as macadam and as rough as cobble stones. Everything was in the best order, and the stables and grounds in the best condition to please horsemen. Those who expect to make entries can go to either place and train and prepare for the contests. These two associations have done their full part. It is now left for the horsemen to say whether they will enter and co-operate to make two great summer meetings. If they prove successful now, a precedent will be established for the future which will be much to the credit of the horsemen. We hope there will be large lists of entries. J. R. Lowell is secretary at Moberly, and N. D. Robnett is secretary at Columbia, who will give all requisite information.

I took another trip to Kahoka last Friday. The "osone" was not so "intoxicating" this time, it didn't dare to be; I had my wife along. Am writing this between looks down the road for my "Sunday Morning Times-Herald" from Chicago. We are barred from St. Louis by the fact that we can't get "a till" "next day," while the Chicago papers reach our station at 9 o'clock the morning of publication. While in Kahoka last Friday afternoon, I made a trip out Germania avenue, to the city residence and stables of our mutual friend, George W. Miller, one of the pioneer and most liberal and advanced breeders of the trotting and pacing horse in North-east Missouri. I did not have the pleasure of greeting friend George, as he was down to his farm. He is a busy man, farming, breeding standard trotters, runs a large and elegantly appointed barbershop and puts in his idle time collecting rents from various properties he owns in the city.

The last and the least shall come first in individual mention of his horse stock. Kate M., the dam of Kahoka Boy, 1:57, had just dropped early that morning—May 4th—a stoutly-made colt foal by Baron Dillon, 2:32. The little fellow is a beautiful "f" mouse" color and has got "em all" "guessin'" what color he will eventually be. My prediction is burnt chestnut. I have had two colts foaled that particular mouse color, and they both came out burnt chestnut. They do say George Miller is the best pleased man in seven states. He "wanted" a colt to replace the "Boy" later on, and thinks he has just the combination to fill the bill. I did not learn whether he designed breeding Kate M. this season or would let her rest a year.

Kahoka Boy, 1:57, is rugged and lusty. He is a handsomely turned bay horse smooth as a pipkin and "good" at all points. Has one of the best "heads" on earth and is reliable everywhere. He makes half of the team hauling lime, sand, stone, wood, lumber, fence posts, manure, or what not. He is no Sunday or dress parade horse, but a good, all round, every-day, useful horse. If he had even had "half a show" his mark would have been 2:10 or better, and that's no dream, but it's scarcely worth while to write "what might have been."

Mr. Miller has some fourteen or fifteen head of horses. Among them I noticed Lomont, b. m., by Egmont; King Bulard, 4, b. g., 1:55 hands; by Greenbush King. This fellow is large, rangy, up-headed, of fine style and carriage and a sure trotter, unless all signs fail. An attractive b. m., Kahoka Girl, 5, 1:54 high, by Kahoka Boy, out of Kahoka Belle. This mare is sister to Dr. Buckner, 2:26. The other stock was down at the farm, and I did not have time to go and look it over. Mr. Miller has had too many irons in the fire to enable him to keep his horses in the best of condition. He has always done his own training, assisted in later years by his sons and he has been too much hampered by outside issues to give his horses the opportunities they so richly deserved. The boys are joggling some of the youngsters that will be heard from later on.

The old Patchen mare got down to business sometime during the night of April 28th, for on Sunday morning, the 29th, just one week ago, I was rejected to note a large chestnut filly cowering around her. The little miss measured three feet six inches at the withers, has two white socks behind, white pasterns in front, all four feet white and a narrow blaze in face. Is a beautifully gaited trotter and looks to be the making of a 2:15 or 2:16 mare. Mr. L. E. Clement rather dampened my expectations when responding to my request for his opinion as to the result of mating with Gale Allerton, 2007, when he intimated that the Daniel Lambert cross in his pedigree would diminish the size of his produce. I have named her Audrey Allerton, for my youngest daughter.

## MAMBRINO, JR.

Peaksville, Mo., May 16, 1900.

## MAKING MONEY.

Cypress, Mo., March 30, 1900.

H. H. Hamer, Vermont, Ill.:

Dear Sir—I will have to have more of your Sure Cure for Fistula, Poll Evil, etc. I can make more money selling it than I can making it. I bought a horse last spring for \$10.00, which had fistula and Bone Spavin. I cured him with Hamer's Sure Cure and sold him for the full \$50.00. Yours respectfully,

HOWARD BARLOW.

## L. E. CLEMENT ROASTS ICONOCLAST.

There are some things that are strange, and among the strangest are some of the happenings that have come to me of late. Iconoclast, at the close of a personal letter dated March 11th, closes in this way: "You will notice in the last issue I give you a little friendly shot, an occasional controversy being the 'life of trade'."

In the issue of May 10th, 1900, I find the following: "I confess that it is a little difficult to carry on much of an argument with a gentleman who regards the 'life of trade' as a greater sire and progenitor than Hambletonian, and who believes that Woodford Mambrino will soon take the lead of George Wilkes, has views so different from those of the majority of horsemen that anything like an argument is impossible. There are in my judgment quite a number of sons of George Wilkes that are now in advance of Woodford Mambrino, and are growing on him to-day and always will be growing on him, notwithstanding the advantage that Woodford Mambrino has point as a sire. "After reading the 2:15 list of the daughters of Blue Bull persuasion would have refrained from making themselves ridiculous by making up in imagination. Facts of small importance to him. They don't affect him at all, and the more absurd a contention may be, the more he clings to it. It would have seemed to many people that it had been Mr. Clement's desire to win his faith to a great extent by his selection of Brown Hall, who is the foremost that the world has ever seen. But the Knight of Blue Bull pays no attention to considerations that affect other men. He has fixed his ideal standard and one couldn't pile up facts enough to induce him to vary his hair's breadth. With him the 2:25 pace still remains just as good as the 2:10 trot."

## MAMBRINO, JR.'S, GOSSIP.

Editor RURAL WORLD: This is the third Sunday after Easter and raining to beat the band. It is a much needed rain in these parts. It has been dry for nearly three weeks. Vegetation was not particularly suffering for water, but the roads were getting hard as macadam and as rough as cobble stones. Everything was in the best order, and the stables and grounds in the best condition to please horsemen. Those who expect to make entries can go to either place and train and prepare for the contests. These two associations have done their full part. It is now left for the horsemen to say whether they will enter and co-operate to make two great summer meetings. If they prove successful now, a precedent will be established for the future which will be much to the credit of the horsemen. We hope there will be large lists of entries. J. R. Lowell is secretary at Moberly, and N. D. Robnett is secretary at Columbia, who will give all requisite information.

I took another trip to Kahoka last Friday. The "osone" was not so "intoxicating" this time, it didn't dare to be; I had my wife along. Am writing this between looks down the road for my "Sunday Morning Times-Herald" from Chicago. We are barred from St. Louis by the fact that we can't get "a till" "next day," while the Chicago papers reach our station at 9 o'clock the morning of publication. While in Kahoka last Friday afternoon, I made a trip out Germania avenue, to the city residence and stables of our mutual friend, George W. Miller, one of the pioneer and most liberal and advanced breeders of the trotting and pacing horse in North-east Missouri. I did not have the pleasure of greeting friend George, as he was down to his farm. He is a busy man, farming, breeding standard trotters, runs a large and elegantly appointed barbershop and puts in his idle time collecting rents from various properties he owns in the city.

The last and the least shall come first in individual mention of his horse stock. Kate M., the dam of Kahoka Boy, 1:57, had just dropped early that morning—May 4th—a stoutly-made colt foal by Baron Dillon, 2:32. The little fellow is a beautiful "f" mouse" color and has got "em all" "guessin'" what color he will eventually be. My prediction is burnt chestnut. I have had two colts foaled that particular mouse color, and they both came out burnt chestnut. They do say George Miller is the best pleased man in seven states. He "wanted" a colt to replace the "Boy" later on, and thinks he has just the combination to fill the bill. I did not learn whether he designed breeding Kate M. this season or would let her rest a year.

Kahoka Boy, 1:57, is rugged and lusty. He is a handsomely turned bay horse smooth as a pipkin and "good" at all points. Has one of the best "heads" on earth and is reliable everywhere. He makes half of the team hauling lime, sand, stone, wood, lumber, fence posts, manure, or what not. He is no Sunday or dress parade horse, but a good, all round, every-day, useful horse. If he had even had "half a show" his mark would have been 2:10 or better, and that's no dream, but it's scarcely worth while to write "what might have been."

Mr. Miller has some fourteen or fifteen head of horses. Among them I noticed Lomont, b. m., by Egmont; King Bulard, 4, b. g., 1:55 hands; by Greenbush King. This fellow is large, rangy, up-headed, of fine style and carriage and a sure trotter, unless all signs fail. An attractive b. m., Kahoka Girl, 5, 1:54 high, by Kahoka Boy, out of Kahoka Belle. This mare is sister to Dr. Buckner, 2:26. The other stock was down at the farm, and I did not have time to go and look it over. Mr. Miller has had too many irons in the fire to enable him to keep his horses in the best of condition. He has always done his own training, assisted in later years by his sons and he has been too much hampered by outside issues to give his horses the opportunities they so richly deserved. The boys are joggling some of the youngsters that will be heard from later on.

The old Patchen mare got down to business sometime during the night of April 28th, for on Sunday morning, the 29th, just one week ago, I was rejected to note a large chestnut filly cowering around her. The little miss measured three feet six inches at the withers, has two white socks behind, white pasterns in front, all four feet white and a narrow blaze in face. Is a beautifully gaited trotter and looks to be the making of a 2:15 or 2:16 mare. Mr. L. E. Clement rather dampened my expectations when responding to my request for his opinion as to the result of mating with Gale Allerton, 2007, when he intimated that the Daniel Lambert cross in his pedigree would diminish the size of his produce. I have named her Audrey Allerton, for my youngest daughter.

## MAMBRINO, JR.

Peaksville, Mo., May 16, 1900.

## MAKING MONEY.

Cypress, Mo., March 30, 1900.

H. H. Hamer, Vermont, Ill.:

Dear Sir—I will have to have more of your Sure Cure for Fistula, Poll Evil, etc. I can make more money selling it than I can making it. I bought a horse last spring for \$10.00, which had fistula and Bone Spavin. I cured him with Hamer's Sure Cure and sold him for the full \$50.00. Yours respectfully,

HOWARD BARLOW.

## Moberly and Columbia Fairs

Moberly, July 24th to 28th, (INCLUSIVE.)  
Columbia, July 31st to August 3d, (INCLUSIVE.)

## STAKE RACES.

No. 1.—2:45 Trot.....	\$1000 00
No. 2.—2:37 Pace.....	500 00
No. 3.—2:17 Trot.....	500 00
No. 4.—Three-Year-Old Trot.....	500 00
No. 5.—2:15 Pace.....	500 00
No. 6.—2:30 Trot.....	500 00
No. 7.—Three-Year-Old Pace.....	500 00
No. 8.—2:30 Pace.....	500 00
No. 9.—2:35 Trot.....	400 00
No. 10.—2:30 Pace.....	500 00
No. 11.—2:35 Trot.....	1000 00
No. 12.—2:35 Pace.....	500 00

J. R. LOWELL, Secretary, Moberly, Mo.

## CONDITIONS.

Daily program will be so arranged that horses can start twice during the week. Old rule will govern distance paid. Record made on day entries close, so far.

## \$1,000 STAKES.

Nomination in these stakes close June 1st, at which time 2 per cent of \$20 must accompany nomination. July 1st horse must be named, and balance of entry fee \$15 be paid, owners and horses will only guarantee 5000 purses for these, thus assuring 20 a race. Nomination will be dropped when motor fail to make payments.

All other stakes close June 1st at which time 2 per cent of \$10 must accompany entry, and 3 per cent of \$15 be paid evening before race. This association will endeavor to provide suitable purses for any \$500 stake not filling. Five per cent deducted from winners in all races. Beginning at Moberly, Mo., July 24, you can have ten straight weeks of racing, Moberly, Columbia, Holden, Rich Hill, Harrisonville and Springfield, Mo., thence to Oklahoma City, Guthrie, Perry and Newkirk, Okla.

N. D. ROBNETT, Secretary, Columbia, Mo.

## St. Joseph, Mo., Race Meeting, July 3, 4, 5, 6, 1900

All purses paid in cash from the stand as the judges announce their decision.

## PROGRAM.

1. 2:45 Trotting Pacer.....\$500 00 2. 2:35 Trotting Pacer.....\$500 00

3. 2:25 Trotting Pacer.....\$500 00 4. 2:15 Trotting Pacer.....\$500 00

5. 2:15 Trotting Pacer.....\$500 00 6. 2:15 Trotting Pacer.....\$500 00

7. 2:15 Trotting Pacer.....\$500 00 8. 2:15 Trotting Pacer.....\$500 00

9. 2:15 Trotting Pacer.....\$500 00 10. 2:15 Trotting Pacer.....\$500 00

11. 2:15 Trotting Pacer.....\$500 00 12. 2:15 Trotting Pacer.....\$500 00

13. 2:15 Trotting Pacer.....\$500 00 14. 2:15 Trotting Pacer.....\$500 00

15. 2:15 Trotting Pacer.....\$500 00 16. 2:15 Trotting Pacer.....\$500 00

17. 2:15 Trotting Pacer.....\$500 00 18. 2:15 Trotting Pacer.....\$500 00

19. 2:15 Trotting Pacer.....\$500 00 20. 2:15 Trotting Pacer.....\$500 00

21. 2:15 Trotting Pacer.....\$500 00 22. 2:15 Trotting Pacer.....\$500 00

23. 2:15 Trotting Pacer.....\$500 00 24. 2:15 Trotting Pacer.....\$500 00

25. 2:15 Trotting Pacer.....\$500 00 26. 2:15 Trotting Pacer.....\$500 00

27. 2:15 Trotting Pacer.....\$500 00 28. 2:15 Trotting Pacer.....\$500 00

29. 2:15 Trotting Pacer.....\$500 00 30. 2:15 Trotting Pacer.....\$500 00

31. 2:15 Trotting Pacer.....\$500 00 32. 2:15 Trotting Pacer.....\$500 00

33. 2:15 Trotting Pacer.....\$500 00 34. 2:15 Trotting Pacer.....\$500 00

35. 2:15 Trotting Pacer.....\$500 00 36. 2:15 Trotting Pacer.....\$500 00

37. 2:15 Trotting Pacer.....\$500 00 38. 2:15 Trotting Pacer.....\$500 00

39. 2:15 Trotting Pacer.....\$500 00 40. 2:15 Trotting Pacer.....\$500 00

41. 2:15 Trotting Pacer.....\$500 00 42. 2:15 Trotting Pacer.....\$500 00

43. 2:15 Trotting Pacer.....\$500 00 44. 2:15 Trotting Pacer.....\$500 00

45. 2:15 Trotting Pacer.....\$500 00 46. 2:15 Trotting Pacer.....\$500 00

47. 2:15 Trotting Pacer.....\$500 00 48. 2:15 Trotting Pacer.....\$500 00

49. 2:15 Trotting Pacer.....\$500 00 50. 2:15 Trotting Pacer.....\$500 00

51. 2:15 Trotting Pacer.....\$500 00 52. 2:15 Trotting Pacer.....\$500 00

53. 2:15 Trotting Pacer.....\$500 00 54. 2:15 Trotting Pacer.....\$500 00

55. 2:15 Trotting Pacer.....\$500 00 56. 2:15 Trotting Pacer.....\$500 00

57. 2:15 Trotting Pacer.....\$500 00 58. 2:15 Trotting Pacer.....\$500 00

59. 2:15 Trotting Pacer.....\$500 00 60. 2:15 Trotting Pacer.....\$500 00

61. 2:15 Trotting Pacer.....\$500 00 62. 2:15 Trotting Pacer.....\$500 00

63. 2:15 Trotting Pacer.....\$500 00 64. 2:15 Trotting Pacer.....\$500 00

65. 2:15 Trotting Pacer.....\$500 00 66. 2:15 Trotting Pacer.....\$500 00

67. 2:15 Trotting Pacer.....\$500 00 68. 2:15 Trotting Pacer.....\$500 00

69. 2:15 Trotting Pacer.....\$500 00 70. 2:15 Trotting Pacer.....\$500 00

71. 2:15 Trotting Pacer.....\$500 00 72. 2:15 Trotting Pacer.....\$500 00

73. 2:15 Trotting Pacer.....\$500 00 74. 2:15 Trotting Pacer.....\$500 00

75. 2:15 Trotting Pacer.....\$500 00 76. 2:15 Trotting Pacer.....\$500 00

77. 2:15 Trotting Pacer.....\$500 00 78. 2:15 Trotting Pacer.....\$500 00

79. 2:15 Trotting Pacer.....\$500 00 80. 2:15 Trotting Pacer.....\$500 00

81. 2:15 Trotting Pacer.....\$500 00 82. 2:15 Trotting Pacer.....\$500 00

83. 2:15 Trotting Pacer.....\$500 00 84. 2:15 Trotting Pacer.....\$500 00

85. 2:15 Trotting Pacer.....\$500 00 86. 2:15 Trotting Pacer.....\$500 00

87. 2:15 Trotting Pacer.....\$500 00 88. 2:15 Trotting Pacer.....\$500 00

89. 2:15 Trotting Pacer.....\$500 00 90. 2:15 Trotting Pacer.....\$500 00

91. 2:15 Trotting Pacer.....\$500 00 92. 2:15 Trotting Pacer.....\$500 00

93. 2:15 Trotting Pacer.....\$500 00 94. 2:15 Trotting Pacer.....\$500 00

95. 2:15 Trotting Pacer.....\$500 00 96. 2:15 Trotting Pacer.....\$500 00

97. 2:15 Trotting Pacer.....\$500 00 98. 2:15 Trotting Pacer.....\$500 00

99. 2:15 Trotting Pacer.....\$500 00 100. 2:15 Trotting Pacer.....\$500 00

101. 2:15 Trotting Pacer.....\$500 00 102. 2:15 Trotting Pacer.....\$500 00

103. 2:15 Trotting Pacer.....\$500 00 104. 2:15 Trotting Pacer.....\$500 00

105. 2:15 Trotting Pacer.....\$500 00 106. 2:15 Trotting Pacer.....\$500 00

107. 2:15 Trotting Pacer.....\$500 00 108. 2:15 Trotting Pacer.....\$500 00

109. 2:15 Trotting Pacer.....\$500 0



## Home Circle.

Written for the RURAL WORLD.  
SPRINGTIME.

The woodland is teeming with life and bloom.  
Whispering winds woo wild flowers  
sweating,  
Nature is working away in her loom.  
Carpet of emerald under her feet.

"We must have music," Dame Nature cries—  
"Come to your places song-bird and bee!"  
A rushing of sound, a sudden surprise.  
Winged things are calling from every tree.

"One, two, sing! Keep your tones together!"  
The forest with music doth now resound.  
Who can tell which "birds are of a feather?"  
"Silence!" and stillness reigns quite profound.

The baton is wielded deftly and well.  
Music all hearts is filling (thrilling);  
Everything hidden in forest or dell,  
To do his best is anxiously willing.

Only the critic of music complains—  
"Why do not all the birds sing the same lay?"  
"Because"—Mother Nature kindly explains—  
"Each has his own song, he is taught that way."

MAY MYRTLE.

Written for the RURAL WORLD.  
SOME NEWS FROM ABSENT FRIENDS.

At last we have heard from Idyll! After innumerable and almost unaccountable troubles, difficulties which beset her way, our friend has at last reached the Mecca for which she so longed, her new home, far away, in the wilds of the Ozark Mountains! Alas, now, for the delightful chats we were to have, when I moved into visiting distance of Idyll! How we used to regret the long distance which separated us, when we were fain to interchange our thoughts through the medium of a voluminous correspondence! How I hugged myself, when moving to St. Louis County, with the thought that I could "run over to Idyll" with all my joys and sorrows, and share them with her! And now, after the interchange of a few short calls, behold, Idyll very heartlessly proceeds to

"Fold up her tent like the Arab  
And silently steal away!"

I trust no one will imagine that it was my proximity which drove her away, though it has a suspicious look, I must own! But how any one could be so heartless as to leave an Eden as Idyll's delightful little home in St. Louis, even for the pleasures of rural life, I confess I do not see!

Garnet has expressed my views to perfection on the curfew law. In a large city, such as ours, this law would be a great safeguard to young people of both sexes. And, oh! what a load of worry it would take from the minds of hundreds of poor mothers! On summer nights, especially, the streets of St. Louis are filled with children of all ages, romping, scuffling, quarrelling and making night hideous with their noise, even till the "wee small hours." How can parents expect to bring up their children in the way they should go, how train them to be upright and worthy citizens of our glorious country, while allowing such untrammelled license at the hours when they should be under the shelter of their own roofs and wrapped in the protecting arms of that gentle power which "kneads up the dust of care," and renovates the over-tired limbs and brains of weary mortals—blessed sleep!

How many criminals are there who might have been happy and respected citizens of our community if they had received proper training, "physically, intellectually, morally, socially and religiously," as Garnet says, instead of being allowed to run wild, exposed to all the snares and temptations of late hours and improper associates? And yet, our Mayor vetoed the curfew law when it had been passed by the Legislature! Men and women, priest and layman, are rampant in demanding the closing of windows and decrying them as a nuisance and a pitfall to the young. Yet they take no measures to nip the evil in the bud, as it should be, before it has grown and blossomed, and scattered its evil seed and formed thousands of ramifications, which can never be wholly eradicated!

If children are allowed to roam the streets at night, and the curfew law would be a check, if not a radical cure, for this crying evil. Yet our Mayor vetoed the bill on the grounds that it would "interfere with the rights of citizens!" Heaven forbid such rights!

Fred O. Bibles, I read your articles with much interest. If you will let me offer a bit of advice, however, I will say that I believe soda (common baking, or bicarbonate of soda), is better for burns than baking powder. The latter, even when pure, contains an acid which would most likely prove irritating; while the cheap and impure kinds contain lime, which would certainly be injurious to a burn. But soda is excellent, and will prevent blistering if applied in time. The lime water and linseed oil I have no doubt would be excellent for allaying inflammation.

I find Mrs. Mary Anderson's article on the "Lunch Basket" very interesting and instructive.

I would like to say a few words about hens. In our neighborhood a hen can not be bought for less than forty or fifty cents, and hens are very scarce at that price. Of course, I do not allude to the fine varieties—those I know are higher. But ten cents a pound for chicken, for a "Sunday dinner" seems exorbitant to one used to buying or selling fine, large hens at 25 cents apiece. And there are times when you can not buy a hen here at any price! Think of that, ye poultry raisers! I have secured a few hens, however, and will raise chickens for home consumption hereafter. I prefer the Leghorns, brown or white, for laying hens, and Plymouth Rocks for the table. In my peregrinations in search of hens, I came across a lady who had a few Buff Plymouths. And they were beautiful! Every feather looked like pure gold! She had paid \$5 for a sitting of eggs, so she told me. But I saw they were advertised cheaper in the RURAL. I would like to have a sitting, but—circumstances forbid.

NINA.

MRS. A. H. WING.  
(Rosa Autumn.)

Written for the RURAL WORLD.

"ROSA AUTUMN."

As I grasped the hand of an old friend the other day, his face wore an expression of mingled surprise and curiosity at seeing a full-blown rose of a dainty, pink hue pinned on the lapel of my coat. It was the twenty-first day of November. Just nine days before Thanksgiving. And without taking his hand from mine he asked:

"Where did you find such a perfect rose at this late day?"

Perhaps my responsive smile expressed a satisfaction as marked as was his curiosity, as I replied: "That rose, sir, was presented to me by Rosa Autumn."

"And who is Rosa Autumn?" he asked. After a few moments friendly greeting I told him the following story:

"Rosa Autumn to-day is one of the most interesting old ladies I have ever met. Her hair is fast whitening with the passing years, and her steps faltering, yet her eyes retain much of their youthful luster, her face is as serene as an autumn day, and her countenance as radiant with remembered blessings and the hope of future joys, as a rosy June morning."

"She was a young woman of extraordinary mind and personal attraction, moving among her choice circle of friends with that majestic sweetness and womanly beauty which have so characterized her throughout life, seeking and finding the purest, noblest and best things—a half century before I ever experienced a heart throb or beheld a crimson sunset."

"It has been my privilege to enjoy nearly three years of Rosa Autumn's society. I have spent many happy hours 'sitting at her feet,' looking up into her amiable face, while she related an experience, prescribed a precaution, or in a general way imparted some knowledge that was as edifying as it was entertaining. These visits constitute golden links in the long chain of cherished memories which gladden and enrich my life; and taken as a whole, these visits form an epoch in my history which shall influence all my future."

"Not only does this woman's graceful manner and refined intellect charm a visitor, but her home is perhaps equally as charming. The first impression one has as he descends from the carriage in front of its beautiful yard, is so delightful that he does not know for a time whether to advance into the interior of what seems more like a dainty little ivory garden than anything else, or stand just inside the door—drinking in its loved lines with 'thirty-eight,'—just as a lover would do."

"A sort of a dreamy, enchanted spot is Rosa Autumn's pretty front yard—filled with the greenest lawns, breezy trees and fragrant flowers. I think I never walked down the paths through those flower-beds, or strolled leisurely across that velvet lawn, or sat beneath those waving cedar trees, but my soul was intoxicated with a sensation in which mingled joy and sadness, an inspiration which awakened noblest ambitions, and memories that often moved me to tears. The house itself is as old and distinct in appearance from all the other houses in surrounding country—as are its pleasant environments; just plain enough to be cheerful, adorned enough to be attractive, with an indescribable love-light falling over the walls and carpets, pictures and center table, organ and library—like a holy atmosphere stealing in from the Brighter World."

"As a visitor rests there in some cushioned nook of that cozy little sitting room, or lingers out upon the quaint veranda overlooking the front yard, he is apt to wonder whether it is the lovely home and environments that sweeten and soften the spirit of this unusual woman, or whether her sweet face and congenial smile cast over the room and its inmates such singular loveliness!"

P. J. RINEHART.

A good home presided over by a woman who continues, even in the sunset of life, to tinge all other lives with the roseate hues of helpful, loving service is a blessing to any community, and such testimony as this gives Rosa Autumn well-earned credit for her many virtues. Pleasure will be found in studying the face of Rosa Autumn as we give it in the Home Circle this week, as it accompanies this glimpse we have given us of her home life. Her letters to the Home Circle always disclose to us the mother-heart.

Written for the RURAL WORLD.

WONDERS OF THE WORLD.

As the years roll by, until centuries upon centuries have been blanked upon the scroll of time, it is pleasing to realize that our National Museums have endeavored to preserve for future generations the evidences of those civilizations that have perished from off the face of the globe. Historians have handed down events—the museum has preserved many articles of stone and bronze that these, now silent actors, utilized in their daily avocations.

The National Museum at Washington teems with many objects of absorbing interest. We have not the space at our disposal in the RURAL WORLD to tell all about this great museum—a museum containing so much of interest to all the American people. Here we find mummies from Egypt—silent sleepers of the Nile—over 3,000 years old, gazing into the blankness of eternity, upon whose brows we can interpret no thought nor fathom the meaning of their profound and painful silence. From the land of the Pyramids—across the bridge of fleeting centuries—brings us to the landing of the

Pilgrim fathers. Numerous articles of warfare are here preserved, among which is a couple of swords, rusty with age. Down from this period we reach the days of the Revolution.

Perhaps the best Colonial display is that of Gen. George Washington. Among the numerous interesting articles that have been collected of this illustrious citizen in his military suit. This suit was worn by the General when he resigned his commission as Commander-in-Chief at Annapolis, Maryland, in 1783. There is also a surveyor's compass used in laying out Mount Vernon; large brass candlestick used by Washington when writing his famous farewell address; Washington's camp chest, tin plates, sauce pans, camp utensils, tents, dishes and numerous other articles that were associated with the life of the great General both in the Revolution and at his model home on the peaceful Potomac. These articles are valued beyond price, and are perhaps the most interesting articles on exhibition either in the National or Smithsonian Museums.

A good collection of bayonets is on exhibition; also a formidable pistol a couple of feet long, plowed up in Maryland, on the route traversed by General Braddock. During the French and Indian war (1754-63) Gen. Edward Braddock, Commander-in-Chief of the Royal forces, accompanied by George Washington as aide-de-camp, started June 10, 1755, from Cumberland, Maryland, with 2,000 regulars and provincials on an expedition against Fort Duquesne (now Pittsburgh). The troops were surprised July 9 by the French and Indians in ambush near Monongahela, and defeated with great loss, General Braddock being mortally wounded. This event taught Washington the tactics of the foe he afterwards met and so successfully vanquished.

Perhaps the most valuable and interesting stamp in the world—a stamp that cost England her richest colony—is here exhibited, the "Stamp Act Stamp." Laws for the raising of revenues by requiring the use of paper and parchment bearing a government stamp were first introduced into England in the reign of William and Mary. The endeavor of England to force stamp duties upon her trans-Atlantic colonies in 1765 was among the efficient causes of the Revolution which resulted in the independence of the American colonies.

A gun ornamented with silver and coral, presented to President Jefferson by the Sultan of Morocco; also another gun from the Sultan to Jefferson, it being a Moorish flint-lock, smooth bore, oak stock, and ornamented with gold. Both guns 6½ feet long.

A glass flute presented to President Madison, is, to say the least, interesting. This magic music-maker was highly prized by President Madison, and was a gift so unique as to attract universal attention and admiration.

Next we view the objects of interest formerly belonging to Gen. Andrew Jackson—"Old Hickory." Military coat worn by citizens of Joe Davis county; cane carved out of wood from the estate of Sir Walter Scott; field glasses; vases from Li Hung Chang; awards from rulers of foreign countries; a few of the interesting articles exhibited in this magnificent collection.

Among the thousands of other articles we find a fine collection of stone utensils and Indian arrow heads from Missouri, the counties of Clark, Lewis, Boone, Linn, Saline, Howard and Stoddard being particularly well represented. Military coat worn by Colonel Mosby during the Civil War is on exhibition. Steel spade used in throwing the first earth in constructing the Illinois and Mississippi canal, with the following inscription engraved on it: "Illinois and Mississippi Canal," is an interesting relic. With this spade on July 12, 1822, the first cut was made in the canal between the Illinois and Mississippi. Now we view the starting flag of John P. Jones, the famous hand press of Benjamin Franklin, wooden and flags of the Mexican, Civil and Spanish wars.

Readers of the RURAL WORLD have spent a pleasant and profitable hour with us in our stroll through the National Museum, and we will lay down our pen, confident that all who have an opportunity will spend many more hours among the wonders of the Smithsonian Institution, D. C. S. F. GILLESPIE.

CANNED BEANS.

The following recipes have been sent in response to the request for one for canning beans which appeared recently in the Home Circle:

RECIPE NO. 1.—Gather the beans when tender. String, leave whole and cook in clear salt water, using only enough salt to season them. Boil until they can be pierced with a straw. Put in new tin cans, being careful to pack the beans evenly with water, then seal. Place in a cool cellar. Much depends upon the temperature in keeping canned beans. They will soften in a warm place. Last year I put up a half dozen cans as an experiment; half was the yellow wax, the others the green beans. I never saw firmer ones than these. Only one can out of the dozen was lost, and that I think was caused by the can not being air tight. A READER.

RECIPE NO. 2.—Slice the beans fine and fill the cans. Set them in a boiler, filling the boiler with water up to the neck of the can. Put something in the bottom to set the jars on, grate out the oven will do this, will press the beans evenly. Boil four hours. Leave the jars unsealed until done boiling. Season with salt and pepper to taste. Corn may be canned in the same way. If this does not give entire satisfaction, boil for two or three hours before putting in the cans. Arapaho Co., Colo. A. T. NESTER.

COCONUT PUDDING.—The most delicious coconut pudding is of the white coconut. It is baked in individual cups, each one holding about a gill. The meat of a good sized coconut, grated fresh, should be used for this pudding, not dried coconut. Add a cupful of the milk of the coconut and the whites of six eggs beaten with half a pound of granulated sugar. Put in a pinch of salt, beat well, and stir in two cupfuls of milk and one cupful of cream. Season if you wish, with a grating of orange peel, though it is not necessary, and the pudding will not be so pure in color. Bake in a shallow dish or in a pudding mold, and dredge the cups with sugar before filling them.

RUBARB JELLY.—Boil two cups rubarb in one pint of water and one cup of sugar till it softens; then add one and a half tablespoonfuls gelatin dissolved in a little boiling water; set the mixture in cold water and stir till it begins to thicken; then beat in half a pound of granulated sugar; pour into a mold; when firm, invert onto a dish and whip cream over the top. ICED SAGO PUDDING.—Cook two cups sagoberries with one-half cup sugar and one cup water; press through a sieve; then add to the juice two level table spoons sago; boil till sago is transparent; pour in a border mold and when cold invert onto a dish; fill center with cold whipped cream and garnish with blanched almonds broiled and salted, using granulated sugar instead.

BY AND BY.

What will it matter by and by  
Whether my path below was bright,  
Whether it wound through dark or light.

Under a gray or golden sky  
When I look back at it, by and by?

What will it matter by and by  
Whether unhelped I toiled alone,  
Dashed my foot against a stone,  
Missing the charge of the angel high,  
Bidding me think of the by and by?

What will it matter by and by  
Whether with laughing joy I went  
Down through the years with a glad content,  
Never believing—nay, not I!—  
Tears would be sweeter by and by?

What will it matter by and by  
Whether, with cheek to cheek, I've lain  
Close by the pallid angel, Death,  
Soothing myself through sob and sigh:  
"All will be elsewhere by and by?"

What will it matter? Naught, if I  
Only am sure the way I've trod,  
Gloomy or gladdened, leads to God;  
Questioning not of the how, the why,  
If I but reach Him, by and by.

What will I care for the unshared sigh,  
If in my fear of slip or fall,  
Closely I've clung to Christ through all,  
Mindless how rough the path may lie,  
Since He will soothe it by and by.

Ah! it will matter by and by  
Nothing but this; that joy or pain  
Lifted me skyward, helped to gain  
Whether through rack, or smile, or sigh,  
Heaven—home—all in all, by and by!

MARGARET F. PRESTON.

## Poultry Yard.

LIGHT BRAHMAS.

Editor RURAL WORLD: "The Light Brahmas are one of the oldest breeds on the poultry list. They were bred in the Old World centuries ago. All through the annals of the history of poultrydom they have figured prominently as leaders in their race, and withstood ordeals such as no other breed. New breeds may come and go, but the good, old Light Brahmas keep pace with the times. They have maintained the foremost position among thousands of scrutinizing admirers down through all ages, and they continue to satisfy all who have tried them. Any breed giving general satisfaction among so many breeders must have qualities of a very high order—qualities that are undisputed and rarely possessed in any other variety!"

Probably the most valuable and interesting stamp in the world—a stamp that cost England her richest colony—is here exhibited, the "Stamp Act Stamp." Laws for the raising of revenues by requiring the use of paper and parchment bearing a government stamp were first introduced into England in the reign of William and Mary. The endeavor of England to force stamp duties upon her trans-Atlantic colonies in 1765 was among the efficient causes of the Revolution which resulted in the independence of the American colonies.

A gun ornamented with silver and coral, presented to President Jefferson by the Sultan of Morocco; also another gun from the Sultan to Jefferson, it being a Moorish flint-lock, smooth bore, oak stock, and ornamented with gold. Both guns 6½ feet long.

A glass flute presented to President Madison, is, to say the least, interesting. This magic music-maker was highly prized by President Madison, and was a gift so unique as to attract universal attention and admiration.

Next we view the objects of interest formerly belonging to Gen. Andrew Jackson—"Old Hickory." Military coat worn by citizens of Joe Davis county; cane carved out of wood from the estate of Sir Walter Scott; field glasses; vases from Li Hung Chang; awards from rulers of foreign countries; a few of the interesting articles exhibited in this magnificent collection.

Among the thousands of other articles we find a fine collection of stone utensils and Indian arrow heads from Missouri, the counties of Clark, Lewis, Boone, Linn, Saline, Howard and Stoddard being particularly well represented. Military coat worn by Colonel Mosby during the Civil War is on exhibition. Steel spade used in throwing the first earth in constructing the Illinois and Mississippi canal, with the following inscription engraved on it: "Illinois and Mississippi Canal," is an interesting relic. With this spade on July 12, 1822, the first cut was made in the canal between the Illinois and Mississippi. Now we view the starting flag of John P. Jones, the famous hand press of Benjamin Franklin, wooden and flags of the Mexican, Civil and Spanish wars.

Readers of the RURAL WORLD have spent a pleasant and profitable hour with us in our stroll through the National Museum, and we will lay down our pen, confident that all who have an opportunity will spend many more hours among the wonders of the Smithsonian Institution, D. C. S. F. GILLESPIE.

CANNED BEANS.

THE BELGIAN HARE.

RURAL WORLD readers are manifesting considerable interest in Belgian hares. In response to requests for information regarding methods of handling, a correspondent, Mr. J. F. Atkinson, who is an experienced breeder, from whom an article appeared in our issue of May 2, gives in this issue further details. If there is a wish for further information Mr. Atkinson will continue the article.

Editor RURAL WORLD: With a varied experience in raising the different kinds of rabbits, from the common cotton tails, the homely mongrels and the white-coated, pink-eyed beauties, to the now famous food-producing Belgian, I find the most important objects are economy and convenience of buildings and proper and cheap food. My adventure into the rabbit world was that of raising pets in the backyard, in movable hutches, constructed of poultry netting, allowing the mother rabbit to burrow into the earth, to nest and raise her young. Good enough, so far, as Mrs. Rabbit is concerned, as it is in accordance with her wild nature, but as she is now the hands of progressive American, she must submit herself to a more aristocratic style of abode. So also her husband, since she has become domesticated.

BUILDINGS.—In view of economy and convenience, and by experience, we find the following plan for constructing hutches very practicable: Commencing, we will say, with a building 15x15 feet dimensions, on the interior of the one end, construct three rows of shelves, running the entire length of building, three feet apart, one above the other. Next subdivide each one of these shelves into five hutches, by placing partitions every three feet, using either boards or one-inch mesh poultry netting. This netting should be used as a protection from the ravages of cats, rats, dogs, etc. Now you have three rows, each containing five hutches 2x2½ feet. Next enclose the front of each of these with a frame, 2x3 feet, covered with the netting, and hung to swing out. Complete this for breeding pens by placing inside, near further corner, a box 12x18 inches, front cutting a hole in the side for the mother to enter and the front end about six inches square for the mother to enter and swing a door same size, and occasionally you will open this to see how the little squakers are progressing. The above construction affords ample room for 15 mothers and their young, until they are old enough to wean, which is usually about four to five weeks of age. The hutches must be kept singly, as, when allowed together, they "bottle to the death." In mating, one buck is sufficient for six or eight does, but should not be allowed to remain with them more than an hour at a time.

THEIR FEED.—The food question is one of vital importance, since upon this largely depend the profits. Nicely cured clover hay, alfalfa and sorghum hay are used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be fed almost entirely upon this, giving them only a little grain, when you wish to fatten them for table use. It is also excellent food for does, during gestation, as it largely depends on the quality of the food they eat, and sorghum hay is used for roughness. And for grain, commence on the little fellows at about two weeks old, with wheat bran moistened (not wet), and in a few days they will commence eating a few grains of oats, and shortly you can have them on full food of grain and hay. Sorghum hay is by far the most nutritious roughness possible to obtain. They may be



## By the Faithful Use of PERRY DAVIS' PAIN KILLER

You can cure your Rheumatism, Neuralgia, Sciatica or Lumbago.

Price 25 and 50 Cents at Druggists.

### The Snoddy Remedy

Positively Cures and Prevents Hog Cholera and Swine Plague. It is the Best Tonic and Appetizer. It is the Best Tonic and Appetizer. It is the Best Tonic and Appetizer.

Dr. J. H. Snoddy, Alton, Ill., U. S. A.

### SAVE YOUR CASH

You need more. The ready-made kind costs 20 to 35 Cents per lb. We sell you 100 lbs. for \$10.00. Over 100 lbs. and from 10 to 15 Cents per lb. Send for our free Catalogue.

KITELMAN BROTHERS, 25 E. 12th St., Detroit, Mich.

### ZENOLEUM

The way to beat a germ disease is to kill the germ. ZENOLEUM is a germicide. It kills the germ of hog cholera. It kills the germ of swine plague. It kills the germ of any other germ disease.

Dr. J. H. Snoddy, Alton, Ill., U. S. A.

### Excelsior Worm Powder.

Our offer to send a 5c package of this remedy to anyone who will pay express is still good and we shall be pleased to hear from any one who needs a remedy of this kind. But with the evidence of merit that has been printed in these columns for several weeks we think you must be convinced this powder is all we claim for it. We write for terms to agents, order a case sent by freight and express on a small package and be prepared to save your own stock and to supply others with a remedy that can be relied on to do the work.

Galesburg, Mich.

### DIP YOUR SHEEP IN COOPER DIP

BENEFITS THE FLOCK. ERADICATES DISEASE. KILLS INSECTS.

THE TOBACCO WAREHOUSING AND TRADING CO., LOUISVILLE, KY.

### "SWIMBATH"

NON-POISONOUS Sheep Dipping Powder. Kills lice, ticks, and all parasites. An invaluable cure for scab, mange, and all other skin diseases. Perfect satisfaction guaranteed. It is used as directed. Write for full particulars. Write for full particulars.

THE TOBACCO WAREHOUSING AND TRADING CO., LOUISVILLE, KY.

### POLAND-CHINAS.

WE HAVE some fancy registered Poland-China sows of full blood for sale. They are bred by U. S. Chief Zeuchman 342570. Price \$100.00 and upwards. Write for full particulars. Write for full particulars.

THE TOBACCO WAREHOUSING AND TRADING CO., LOUISVILLE, KY.

### POLAND-CHINAS.

At very reasonable prices and of the best breeding. Registered stock. Write for prices.

J. H. WAGENCK, Enfield, Illinois.

### POLAND-CHINAS.

At very reasonable prices and of the best breeding. Registered stock. Write for prices.

J. H. WAGENCK, Enfield, Illinois.

### POLAND-CHINAS.

At very reasonable prices and of the best breeding. Registered stock. Write for prices.

J. H. WAGENCK, Enfield, Illinois.

### POLAND-CHINAS.

At very reasonable prices and of the best breeding. Registered stock. Write for prices.

J. H. WAGENCK, Enfield, Illinois.

## The Pig Pen.

A MINNESOTA HOG MAN.

(T. B. Terry's story of how Mr. Henry manages, concluded from last issue.)

Now we come to the summer feeding of the pigs and their mothers. As I understand, there is a permanent pasture of 5 acres that has been seeded some 20 years. In it grow blue grass, alfalfa, timothy, etc. There is a 5-acre lot on each side of this pasture. On these two lots corn and clover are alternated, so one lot is in clover for pasture each year. The clover seed is sown in the corn at the last working. The grain is gathered, not fed off, and the stalks are left to catch the snow during winter and to protect the clover. Mr. Henry says he gets tremendous crops of corn and clover too, fully double an average crop of corn. You see the land is made very rich, as the hogs are fed white on the clover. He feeds shorts and soaked corn all along. He never feeds on corn alone, but gives shorts once a day always, so as to keep the hogs healthy and growing as fast as fattening. He has never had a hog get down or weak in the legs. The three lots are enclosed with close, woven wire fence, having a barbed wire at the bottom. He uses rape for late pasture, but prefers clover for all summer. It is nice to have a field of rape to close the season on. The land is so rich the growth of clover is enormous. Notice the position of the permanent pasture lot in the center. The pigs can go on this early, and then as soon as the clover is ready can be let into that, on one side or the other of the pasture. This is certainly an admirable arrangement. No rings are ever put in the hogs' noses. This is scientific practice, because when hog cholera germs are around they can readily get into the system through a sore on the nose, or anywhere else, for that matter. But friend Henry says when they root they want something they haven't got—charcoal, ashes, and something, and supplying their wants practically they do not root. About ten days after corn planting time Mr. Henry puts in 2 or 3 acres of pumpkins, planting them alone, 8 feet by 8. On rich land it is surprising the crop can be produced. They actually eat the pumpkins to the top of the stalk, but could not be produced as cheaply and pumpkins answered the purpose well. Notice they are grown by themselves in a way to get great crops of mature pumpkins.

In the field as well as in the yard the hogs always have plenty of fresh, clean water, and they have shade. Apple trees were planted years ago that not only furnish shade, but give the pigs fruit to eat. In years of scarcity the fruit can be gathered, but usually the pigs will pay more for the apples, net, than they will bring in market. Isn't that business, friends? Mr. Henry's system is just so complete all through. You have heard of pigs in clover; but here are pigs in rape, too, and in apples, and shaded and drinking pure water, and with soaked corn and pumpkins and shorts—oh, my! No wonder they weigh 200 pounds when 9 months old. No wonder they never get sick. Forty acres of corn are grown for three pigs besides the five acres named above. They do not usually eat all of it. There is enough left, counting in the stalks, to pay for the oats and bran, shorts, etc., that are fed. So, as nearly as one can figure, it took about 40 acres of land to feed the pigs and their mothers that brought in \$1,400 last year. This includes the pasture, land the pumpkins grown on and the rape and all. The above is no theory; it is not someone telling you what he knows; it is the actual practice of a man who has done it, and starting poor and badly in debt has made money freely right along during the past few years when so many have been complaining of hard times. Mr. Henry has 200 acres of land. I have only given you a part of his business. But it is a part practically by itself. What the use of complaining when there are such chances in every line for the man who does his best? No matter what you are doing, dear reader, there is a lesson for you in Mr. Henry's success. Do your part as well as he has and you will not have anything to complain about. But you must do the very best that is known, no half way work, no careless methods. Incidentally, I might say that this is the kind of men Sp. Gregg, of Minnesota, has on his force, and the only kind he will have; men who have done something thoroughly well and succeeded. Hence the Farmers' Institutes in that state are a power for good. Now to be entirely fair there seems to be a weak

point in this system of growing corn and feeding it to pigs. You will notice it. The 40 acres are being robbed of plant food, slowly. The corn is removed and fed to the pigs, and the manure goes onto the 15 acres and the pumpkins and rape land, and there cannot be much for the corn field. There cannot be enough to make good what is removed. But of course this system is much better than selling the corn off the farm, very much better. Mr. Henry has a good deal more land and rotates his corn with clover and feeds the stalks with purchased protein food, of course, to other stock, so he can make it all right. He can make manure enough to keep up the corn land in connection with clover growing. Others can manage in some such way as this.

### ZENOLEUM FOR HOG CHOLERA.

Even if the most skillful farmer cannot cure hog cholera, he can prevent it. The best plan ever discovered to avoid it is to use Zenoium freely as a disinfectant and antiseptic. Thoroughly clean out and disinfect your hog-pens and yards and allow the sick to remain in these quarters. Put Zenoium in their food and drinking water and their walls and bath. Sprinkle it about their pens, about feeding grounds, etc. Separate the well hogs by immediately placing them in new quarters, and should any of the supposed well hogs become affected, place them immediately with the sick ones. Keep all neighbors from coming to your hogs from infected farms. Do not wear the same boots and clothing when attending your well hogs that you have used in the quarters of the infected ones. Add one tablespoonful of Zenoium to each bucket of mash. Add one tablespoonful to each gallon of cold fresh water and allow the stock to drink this. The experience of Dr. A. T. Peters, Nebraska Veterinary, with Zenoium as a disinfectant has been very satisfactory. It is also used to expel stomach-worms in hogs and to kill hog-lice.

### HOG CHOLERA.

The Division of Animal Pathology of the Experiment Station at the University of Nebraska is perfecting its plans for the coming year's campaign against hog cholera. As is well known, this division has been very active in inaugurating experiments with this disease. One of the experiments under contemplation is the taking up of certain counties in which cholera exists and having experts there to reduce the percentage of mortality in the county. In other words, it is a kind of quarantine system, or stamping-out process; and it is hoped by this method that farmers can guard against this disease to a large extent. The plans are not yet fully matured but will be perfected before the work is begun.

### BLACK EGGS.

S. X. THORNTON, BLACKWATER, MO., the Duroc-Jersey breeder, writes: "Please change my advertisement as per enclosed copy. I have sold out everything I had of boars except two fall pigs and summer litters, but I have 100 yearlings coming in fine style. I have three yearling gilts that farrowed 4 pigs and are taking fine of 25 of them very nicely. With a few sows of that kind to stock up with a man can use his clover and fallen fruit with some corn added, as they need it, and before the holidays have a nice sum of money to use as he thinks best."

## The Shepherd.

### THE USE OF BORGHUM FOR SHEEP.

Borghum has its valuable points as a green fodder plant. It grows quickly and is not stunted by dry weather, as corn is, and it will make a fairly productive crop on poor soil. It is a good crop worth gathering. It has abundant roughage, but as an offset to these good qualities it has some that are so unfavorable for sheep that it is not worth the notice of the shepherd. It may be useful if sown thickly and consumed when less than half grown, and before it becomes harsh and hard, but even then the stems are covered by a hard, dirty coating, which is too indigestible for sheep, and the leaves are edged by exceedingly sharp, saw-like teeth, which are quite likely to seriously injure the sheep's stomach. It is indigestible, and is apt to pack in the third stomach, commonly called the maniple, and thus cause a disease which is almost surely fatal to sheep. Consequently it should not be considered in the list of plants useful for the flock.

### SUMMER SUPPLY OF WATER.

The supply of water is one of the most important things to think of in regard to the welfare of sheep, says the "American Sheep Breeder." As a rule, running water is objectionable unless it is brought by pipes or a spout into a trough or a succession of them. Drinking from a ground should be avoided as much as possible, so should water gathered from roofs into cisterns. All such water is apt to be impure, and may be infected by injurious parasites. Even well water is frequently objectionable on account of mineral impurities, by which any of several diseases may be caused. Brook water, and pond water, which is more or less impure and quite frequently injurious so, it is apt to contain eggs or larvae of injurious intestinal parasites of several kinds, and the dreaded stomach worm even may be taken up by sheep or lambs in water, in which they can stand, then dropping their dung in it. In such cases, and thus sheep be infected. In fact, any water whatever which is exposed to the air, or to visits of other animals, wild or tame, is liable to be contaminated in this way and the use of it is to be guarded against. Instances have occurred in which the fencing up of all natural supplies of water and the digging of a well, the water being pumped into troughs for use by a windmill, have relieved flocks from diseases which have been due to the use of natural supplies. There are other serious results of the use of bad water, which may be mentioned, especially as to water drawn from wells sunk in magnesium limestone rocks. This causes the swelling under the throat of sheep, which is inherited by lambs. These may be born diseased and die very soon after birth, or after a short life of a few months. There is, of course, no means of preventing this, except to provide tanks, or cisterns, and use only rain water. On this account it is a wise thing to do to have all hard water analyzed by sending a gallon of it in a sealed jar to the nearest experiment station, where the water will be tested and reported on free of charge.

This is one of those things which it is well to be sure about. No one may know, until he has tried it, how much better it has been learned, that any locality may be unfit for sheep, and then the knowledge comes too late. In our vast country there cannot fail to be such places, and especially in the west and northwest, of which the character of the soil and water is as yet unknown. Such places are liable to exist in every country and are avoided by shepherds as unfit for the keeping of sheep. And this applies not only to water but to plants, as the loco weed, of which there are two kinds in the west, and the deadly percupine grass, which we have heard of from Missouri to Manitoba. Every place 't is thus seen not fitted for sheep and some are decidedly to be avoided.

### POINTS IN SHEEP HUSBANDRY.

Sheep is the stock for the poor man. It costs but little to start in the sheep business or to provide shelter, and in some respects it costs but little to furnish feed. In the Northwest, especially, says the "Epitomist," sheep are profitable and easily kept. There is great abundance, and over the large sections where the people are determined not to save the corn fodder, sheep may be turned into the corn fields to eat the weeds and feed upon the stalks and corn. They will waste nothing. In every respect sheep are economical stock. They will do well on shock corn, for they do not require corn to be either husked or shelled. While pasture is good they will take care of themselves. When the pastures begin to fail, always bring them gradually onto grain. Sheep should never be kept wholly upon dry feed. The loss from that sort of feeding is very large every year. When there is no grass, engage a cow or two to take in place of pasture. Mutton lambs should be dropped early, and while being fed grain should run on grass and be marketed right off the grass. The flesh is then fine and juicy.

Mutton Breeds.—In these days the mutton breeds are preferred. The consumption of mutton is on the increase. It is a healthy, delicious meat, and our people, since the quality of mutton has so much improved, are learning the true character of it. At the beginning of the fattening process, sheep should be accustomed to grain gradually for two weeks, and then they may be allowed a bushel a day for every 100 head for a month. This quantity may be doubled for the next few weeks, and then they may be fed regularly, furnish good water and observe the strictest cleanliness in sheds, stables and troughs. Supply salt. Fattening Process.—The feed may consist at the beginning of bran and corn or oats and corn, equal parts. Ultimately corn is the cheapest and best feed, though they should have an occasional ration of nitrogenous feed, such as oats, which may be fed in the sheep. Some green stuff, but not too much, should be fed from time to time. Clover hay is splendid, though if shocked corn is fed, the corn fodder will answer for the roughage. Like all domestic animals, sheep enjoy a change, and they will do better on a mixed grain ration. But the price of the nitrogenous foods is the cause of often confining them to a corn diet, with only an occasional feed of clover or alfalfa, however, will balance a corn ration nicely.

We are sure that if our readers could see the book that there is not a subscriber on our books that would not write for one of the "International Stock Books" at once. The title page is a beautiful live stock picture printed in six different colors. This book will be very attractive and valuable to any farmer's library. It will be mailed you free, postage prepaid, if you answer the four questions mentioned in the advertisement. Any farmer can answer them in a minute. It will pay every reader of COLMAN'S RURAL WORLD to write for the book at once. Their free offer is certainly a very unusual one and you ought not to miss it.

## THIS HOG GAINED 400 LBS. IN 100 DAYS

PHOTOGRAPHED FROM LIFE BY A. K. CAMPBELL, BAINBRIDGE, IND.

A REMARKABLE GAIN OF 4 POUNDS EVERY DAY FOR 100 DAYS.

International Food Co., Minneapolis, Minn.

## INTERNATIONAL STOCK FOOD

### 3 FEEDS FOR ONE CENT.

THE QUICKEST PIG AND HOG GROWER IN THE WORLD

It is a SURE AND SAFE CURE FOR WORMS IN PIGS OR HOGS

THE IOWA AGRICULTURAL COLLEGE SEES INFORMATION.

EXPERIMENT STATION, AMES, IOWA, MARCH 5, 1900.

DEAR SIR:—I saw that the International Food Co. state that you had a hog gain 400 lbs. in 100 days. I fed my hogs "International Stock Food" and in 100 days I gained 400 lbs. in 100 days. I am sure it is the best hog feed I ever used. I am sure it is the best hog feed I ever used. I am sure it is the best hog feed I ever used.

## \$3000 STOCK BOOK FREE

It contains 100 large colored engravings of hogs, cattle, sheep, pigs, and poultry, and a description of each. Also a fully illustrated Veterinary Department. The engravings cost \$3,000.00. We will mail you a copy free, postage prepaid, if you answer the four questions mentioned in the advertisement. Write for full particulars. Write for full particulars.

INTERNATIONAL FOOD CO., MINNEAPOLIS, MINN., U. S. A.

Write International Food Co., Minneapolis, Minn. Answer the 4 questions and the \$3,000 Stock Book will be mailed you free, postage prepaid.

## PURELY BRED Duroc-JERSEY REDS

And Chester White Pigs, eight weeks old at \$5.00 each. Year by year the same. Price List. Stocked up. Address D. L. F. ZUMPRO, Avalon, Livingston Co., Mo.

## POLAND-CHINAS ON APPROVAL!

Will ship to parties who will give satisfactory reference and pay express charges one way; pigs of either sex from 6 to 10 months old, and if stock is not as represented I will return charges. Prices in reach of all. Eggs from Premium P. S. Hogs at \$1 per 10 eggs. Eggs from P. S. Hogs at \$1 per 10 eggs. Write for description of stock. C. J. JONES, Evansville, Ind.

## 7 October Boar Pigs by M. B. C. 19399.

Good enough for herd headers. Also fall pigs of either sex, by A's Chief 21014 and others, equally well bred. B. P. Rock eggs from best matings at \$1 per 15. E. E. AXLINE, Oak Grove, Jackson Co., Mo.

## Skabeura-Nicotine Sheep Dip

CURES Scab and Ticks. Improves the wool. Packages \$1 and \$2. Send for descriptive pamphlet. SKABEURA DIP CO., 18 Branch Street, St. Louis, Mo.

## FINE BERKSHIRES

Of the best families at farmers' prices. Write for what you want, or what is better, come and inspect the stock. W. H. KKR, Prairie du Rocher, Illinois.

## Bargains in Berkshires at Sunnyside.

100 HEAD to spare at reasonable prices. 100 heads ready for service. A nice lot of yearling sows either open or bred. Silver Laced Wyandotte eggs for hatching at \$1.00 per 10; also a few nice Chicks for sale at \$1.00 each. We can suit you in quantity and quality at all times. HARRIS & McMAHON, Lamine, Missouri.

## FOR SALE OR TRADE!

Write the \$10,000.00 Duroc, dam Daisy Main. My Herd Headers—Chief's Model Dewey 21607, sire Chief Zeuchman 342, dam the world's famous son Anderson's Model. Chief's Rolloped 23800, son of the \$500.00 Mo. Black Chief, dam Star Pace Beauty. My sows are as good as the Poland-China breed affords. Pigs, any age, in pairs or trio, no kid. If you want good stock at reasonable prices try my Duroc. Write for full particulars. W. H. CROOKS, Eight Mile, Cass Co., Mo.

## Duroc-Jerseys and W. P. Rocks!

March and April pigs, \$5 to \$10, until September 1st. Eggs, \$1 for 15, \$2 for 30. A few choice hens cheap after June 1st. Young stock Sept. 1st. R. S. THOMAS, Carthage, Mo.

## SILBERMAN BROTHERS.

If you want the highest market price obtainable for your wool, send it to the people who have the proper facilities for handling, grading and selling it to the best advantage. We are thoroughly equipped for this purpose, and we will give you the best price for your wool, from April 1, 1900, to April 1, 1901.

WE HANDLED 19,000,000 LBS. OF WOOL

Note the liberal terms and special advantages in our four offers below:

First—A liberal CASH ADVANCE on your shipment, 5% DRAFT WITH BILL OF LADING ATTACHED.

Second—On all money advanced 3 per cent interest per annum.

Third—ONLY ONE CENT PER POUND COMMISSION for selling your wool, which includes STORAGE, INSURANCE and all expenses for six months, except freight and cartage.

Fourth—We furnish sacks and sewing twine free for use to all who consign to us.

We also mail free to all our Inquirers our Circular Letter, which is a review of the wool trade and will keep you posted at all times as to prices, movements, etc. Better get a copy at once.

SILBERMAN BROS., 122, 124, 126 Michigan St. Chicago, Ills.

half of field. Those not pastured lodged badly. This pasturing of grain is splendid for the sheep and lambs, and you see that under certain circumstances it is better for the grain. Have plenty of grain and pasture one-half year until June. This was later than was wise, but the oats did not lodge at all where they were pastured, they stood out well, were a little later, but out-yielded the other

horses about 80, and sheep about 75. Sheep are harder on wild mustard than they are on a maresnest. Mr. Greeley says. They will clean out almost anything.

### SOW DWARF ESSEX RAPE

For sheep: 10 to 12 pounds broadcast; 4 to 5 pounds per acre in drills 15 inches apart. Write for prices and state quantity wanted to Schuler-Cornell Seed Co., 710 North Fourth St., St. Louis, Mo.



